PART TIME COURSES

THE GEORGE BROWN COLLEGE
OF APPLIED ARTS AND TECHNOLOGY
P.O. BOX 1015, STATION B
TORONTO 2B, ONTARIO
TELEPHONE: 362-3971

E-164

PART TIME COURSES

1971-1972

The George Brown College of Applied Arts and Technology

P.O. BOX 1015, STATION B
TORONTO 2B, ONTARIO

GENERAL INFORMATION

EVENING CLASSES will be offered in the subjects listed on the following pages from October 4, 1971 to March 20, 1972. The first term begins on Monday, October 4, 1971 and ends December 17, 1971. The second term begins on Monday, January 17, 1972 and ends March 17, 1972, for most courses.
Unless otherwise stated, courses will be offered one evening per week for 20 weeks. Each session is 3 hours in length for a total of 60 hours (instruction and examination).

REGISTRATION
In person at the George Brown College of Applied Arts and Technology on Monday, September 27, Tuesday, September 28, and Wednesday, September 29, 1971, between the hours of 4:00 p.m. and 9:00 p.m. at each of the campuses.

Campus K — 21 Nassau Street
Tel: 362-3971
Campus C — 507 College Street
Tel: 925-5961
Campus Cl. — 37 Dartnell Avenue
Tel: 362-3971
Campus B — 33 Bloor Street East
Tel: 924-4415
Campus T — 51 Terauley Street
Tel: 362-3971

All course descriptions indicate the Campus that will conduct the course.
Special courses may be introduced if necessary.

FEES
It should be noted that fees are subject to change without prior notice. However, unless stated otherwise in course description, the following fee structure is applicable:

Courses of 30 hours duration — $15.00 Courses of 90 hours duration — $40.00
Courses of 60 hours duration — $26.00 Courses of 120 hours duration — $50.00

This amount includes the $5.00 registration fee and in some cases includes the cost of laboratory fees. In certain courses a minimum laboratory fee will be assessed.

IDENTIFICATION
Your receipt is your admit-to-lecture identification and must be shown to the instructor at the beginning of the course and whenever requested. No receipt is an indication of non-registration.

REFUNDS
The Registrar must be notified in writing of a student's withdrawal. Forms are available at the office for this purpose.
Refunds will be made only if requested before the third scheduled lecture.
In computing the amount of the refund, a charge will be made of $2.00 per scheduled session calculated on a pro-rata basis up to the date of application for a refund regardless of whether not the student attended classes. If a course is cancelled, full refund will be made.
REQUESTS FOR REFUNDS MUST BE ACCOMPANIED BY THE OFFICIAL RECEIPT (white copy). In the case of a course failing to materialize due to insufficient enrollment, a full refund and notification will be forwarded to the applicant.

PARKING
Parking is not available on college property. Some public parking is available at nearby lots.

PREREQUISITES
Candidates should be advised that many of the following courses require considerable related experience. The prerequisites for any given course are the minimum requirements.

MINIMUM ENROLLMENTS
The college reserves the right to cancel any class for which attendance has dropped below the required minimum and to suspend or combine during the session any classes in which attendance falls below the minimum.
Although it is proposed to adhere to the program as outlined in the calendar, courses and hours of instruction are subject to revision without prior notice.

TEXTBOOKS AND SUPPLIES
Textbooks and supplies for all Extension Courses may be purchased at the individual Campus Bookstores.

CERTIFICATION
Applicants should inquire at the time of Registration concerning Certification and Accreditation. Courses with X appended to Course No. indicate Non-Certificate or Special Interest Courses.

SPECIAL COURSES
Special courses will be offered from time to time at the request of individuals or organizations if an adequate enrolment is assured.

COUNSELLING
As a community service George Brown College offers general counselling and information at the Bloor Campus, 33 Bloor Street East. Experienced counsellors are on duty each week day from 9.00 a.m. to 8.00 p.m. to advise on educational and other related matters. Appointments are necessary after 4.00 p.m. There is no charge.

PART TIME CALENDAR INDEX

Accounting
— Accounting I — ACC 100 25
— Accounting II — ACC 101 25
— Machines — see Business Machines
Advanced Practical Cookery — See Cookery
Advertising — BC 901 25
— Basic, Principles, Sales and Merchandising — BC 900 25
— Salesmanship — BC 903 25
— Improved Advertising Efficiency — BC 905 29
Air Conditioning
— Design, Part I — AIR 900 20
— Design, Part II — AIR 901 20
— Control — AIR 902 20
— Design — (Systems) — AIR 904 20
— Warm Air Heating and Air Conditioning (Domestic) — HT 900 21
Alternating Current Circuits — EL 906 30
Aluminum Welding — see Welding
Appliance(s)
— Gas Appliances — AP 900 21
— Servicing, Part I (Electrical Fundamentals and Small Appliances) — AP 903 22
— Servicing, Part II (Domestic Refrigeration) — AP 904 22
— Servicing, Part III (Laundry Equipment) — AP 905 22
Applied Physics — see Physics
Appreciation of Wines, Spirits and Liqueurs — F 907 49
Architectural Drafting — see Drafting
Art of Fine Dining, Part I (Home and Abroad) — F 902 48
Audio Visual — Communications Media Technology
— Audio Visual Theory in Teaching Techniques — AV 901 14
— Audio Visual Workshop — AV 902 14
— Visual Media Workshop — AV 903 14
— Audio Visual Photography — AV 904X 14
— Creative Film Workshop — AV905 14
— C.C.T.V. and Cable T.V. Origination Course (Practical) — AV 906 14
— Audio General — AV 907 14
Automatic Control Principles II — INST 300 34

Baking
— Practical Baking — BK 10 - 1A 46
— Practical Baking and Desserts — F 901 48
Basic Instrumentation Electronics — INST 900 34
Basic Practical Cookery — see Cookery
Benchwork — MACH 140 — A, B, & C 39
— A — Measurement 39
— B — Layout 39
— C — Benchwork 40
Beverage Sales and Service (Cocktail Bartending) — FA 206 46
Binding and Finishing (Graphic Arts)
— Perfect Adhesive Binding and Gathering — GR 225 51
— Programmed Cutter and Folder — GR 125 51
— Sewing and Stitching — GR 126 51
Black and White Reproduction — GR 105 & GR 107 50
Blow Moulding — PL 906 42
Blueprint Reading
— Building Trades — DR 10/20/131 23
— Machine Trades — DR 130 37
— Welding Trade — DR 147 37
— Mechanical/Electrical Constructions Trades — CO 905 24
Boat Building and Yacht Design — MAR 907X 53
Boat Building (Small), Repairs and Maintenance — MAR 906X 53
Bookkeeping (Credit Subject for C.I.Q.S.) — ACC 900 25
Bricklaying — MAS 900 18
Bridgework — see Dental 15
Broadcast Maintenance — see ETV 33
Building Construction — see Construction 24
— Estimating — Quantity (Part 1) — CO 101 24
— Municipal Building Officials Course (Building Inspectors) — CO 902 24
— Job Planning and Control for the Builder — CO 904 24
Business Law — see Law 14
Business Equipment
— Servicing, Part I — BES 900 44
— Servicing, Part II — BES 901 44
Business Machines
— Accounting Machines — BM 900 25
— Dictaphone (Stenaphic) — BM 905 25
— Printing and Rotary Calculator — BM 904 25

Business Management
— (Applied Arts) — EC 902 15
— I — BUS 900 26
— II — BUS 901 26
— Personnel Administration — BUS 902 29
— Purchasing — BC 906 29
Butchery — see Meat Cutting 46

Cabinet Making — CAR 900 18
Cable Television — see Television 32
Cake
— Decoration and Design I — BK 10 - 1C 46
Calculator — see Business Machines 25
Carpentry
— I — CAR 901 18
— II — CAR 902 18
Celestial Navigation for Yachtsmen — MAR 904 53
Ceramics — see Dental 15
Chemistry
— General — CHEM 100 43
— Polymer — CHEM 210 43
— Coatings Technology — CHEM 901 43
Colour Reproduction
— Offset — GR 205 50
— Rotogravure — GR 207 50
Colour Television — see Television 32
Commercial Art — CA 900 52
Commercial and Industrial Gas — AP 901 21
Commercial and Industrial Oil Burners — HT 901 21
Community Developmental Studies — AS 909 14
Compounding and Colouring — PL 904 42
Comptometer — see Business Machines 25
Computations — see Mathematics 12
Computer
— Concepts — see Data Processing 26
— Control Principles I — INST 203 34
— Digital Control Principles — ELTC 906 32
— Programming for Engineering Technicians — DR 904 23
Concrete
— Reinforced Concrete Design — STR 218 24
Construction
— Law — see Law 14
— Materials — CIV 100 24
— Methods and Materials (Building Construction) — CO 901 24
— Job Planning and Control for the Builder — CO 904 24
Cookery
— Advanced Practical — F 904 48
— Basic Practical — F 900 48
— Cooking Practical Commercial I — CHEF 10-1A 46
— Creative Pastry and Desserts — F 905 48
Cost Accounting — see Accounting 25
Crown and Bridgework — see Dental 15

Data Processing
— Basic Computer Concepts I — EDP 100 26
— Basic Computer Concepts II — EDP 101 26
Decoration
— Cake Decoration and Design — BK 10-1C 46
Dental
— Applied Science (Dental Materials) — DENT 905 15
— Ceramics and Ceramics to Metal — DENT 904 15
— Complete Denture Prosthesis — DENT 900 15
— Crown and Bridgework — DENT 903 15
— Orthodontics — DENT 902 15
— Partial Denture Construction — DENT 901 15
Designing with Plastics — PL 903 42
Desserts (Practical Baking and Desserts) — F 901 48
Dictaphone (Stenographic) — see Business Machines 25
Die Design
— I — TD 200 38
— II — TD 201 38
— III — TD 202 38
— Moulds — TD 203 39
Diemaking I — MACH 204 40
Dining (The Art of Fine Dining) — F 902 48
Domestic Refrigeration — see Appliance Servicing 22

Drafting
— Architectural, Part I — DR 900 22
— Architectural, Part II — DR 901 22
— Electrical (Basic) — EL 903 30
— Sheet Metal Pattern — Part I — SM 900 19
— Sheet Metal Pattern — Part II — SM 901 19
— Sheet Metal Theory — SM 902 19
— Sheet Metal Design and Installation — SM 903 19
— Process Pipe Drafting — DR 902 37
Drawing
— Technical I — DR 100 37
— Technical II — DR 903 38
Dressmaking and Industrial Sewing — Part I — ST 900 55
Dressmaking and Industrial Sewing — Part II — ST 901 55
Duplicating — see Business Machines 25

Economics — EC 100 11
Eddy Current Testing I — TEST 901 43
Electric Watch Service — WATCH 900 44
Electrical Discharge Machining — MACH 904 41
Electrical
— Apprentice Review — EL 900 30
— Construction & Maintenance — Part I — EL 10 30
— Construction & Maintenance — Part II — EL 20 30
— Construction & Maintenance — Part III — EL 30 30
— Drafting — see Drafting 30
— Estimating for the Electrical Trade — EL 901 30
— Fundamentals — EL 905 30
— Alternating Current Circuits — EL 906 30
Electronic
— Circuits — ELTC 905 31
— Fundamentals, Part I — ELTC 900 31
— Fundamentals, Part II (Radio) — ELTC 901 31
— Fundamentals, Part III (Television) — ELTC 902 31
— Fundamentals, Part IV (Television) — ELTC 903 31
— Fundamentals, (Transistors) — ELTC 904 31
— Industrial Electronic Controls, Part I — EL 40A 31
— Industrial Electronic Controls, Part II — EL 40B 31
— Industrial Electronic Controls, Part III — EL 40C 31
— Printed Circuit Design — ELTC 916 33
— Electronic Instruments — ELTC 917 33
Engineering
— Stationary, 2nd Class — MAR 901 53
— Stationary, 3rd and 4th Class — MAR 900 53
Engines for Yachtsmen — Mar 908 53
English
— I — ENG 100 11
— II — ENG 200 11
— Rapid Reading — ENG 900X 11
— Technical — ENG 130 11
Entertainment
— Entertaining (Planned Entertaining for Pleasure) — F 906 49
— Entertainment (Strictly for Entertainment) — F 908X 49
— Appreciation of Wines, Spirits and Liqueurs — F 907 49
Estimating (Building Construction Estimating — see Surveying 24
ETV — Introductory ETV and Broadcast Maintenance — ELTC 915 33
Extrusion — PL 902 42

Film Imposition and Stripping — GR 210 51
Film Production — see Creative Film Workshop — AV 905 14
Fixture — see Jig and Fixture 38
Food Technology 46
Food Technology
— Diploma Course in Haute Cuisine 48
— Additives and Nutrition for the Consumer — FC 900 47
— Food Plant Sanitation — FC 901 47
— Manufacturing (Unit Operations) — FT 900 47
— Microbiology — FC 200 47
Forkner Shorthand — see Shorthand 28
Forming and Fabricating of Thermoplastics — PL 900 42
Foundations — see Construction Materials 24
Fur Course I — ST 905 55

Garment Pattern Drafting and Design (Beginners) — ST 902 55
Garment Pattern Drafting and Design (Advanced) — ST 903 55
Gas
— Appliances — AP 900 21
— Commercial and Industrial Gas — AP 901 21
— Propane — AP 902 22
— Fitter (Pre-Licence) — HT 140 21
— Welding — see Welding 36

Gemmology — JWL 900 15
General Chemistry — see Chemistry 43
Grinding — MACH 143 40

Hairstyling
— Ladies' (Advanced) — HAIR 900 55
— Hairdressers' Precertification — HAIR 901 55
— Men's — BARB 900 55
— Barbers' Precertification — BARB 901 55
Haute Cuisine — Diploma Program 48
First Year Semester
— Basic Practical Cookery — F 900 48
— Practical Baking and Desserts — F 901 48
— The Art of Fine Dining — Part I — Home and Abroad — F 902 48
— Principles of Managing Food — Part II — F 903 48
— Advanced Practical Cookery — F 904 48
— Creative Pastry and Desserts — F 905 48
— Planned "Entertaining" for Pleasure — F 906 49
— Appreciation of Wines, Spirits and Liqueurs — F 907 49
— Food Microbiology — FC 200 47
Heating — Warm Air Heating and Air Conditioning — HT 900 21
Hotel Front Office Accounting Procedures — FADM 211 46
Hygiene — see Sanitation 47

Income Tax and the Layman — EC 900X 14
Industrial
— Commercial and Industrial Gas — AP 901 21
— Commercial and Industrial Oil Burners — HT 901 21
— Industrial Process Controls — AP 906 22
— Electronics — see Electronics 31
— Psychology — see Psychology 11
Inert Gas Welding, see Welding — WELD 910 36
Injection Moulding — PL 905 42
Inspections — see Arbitration
Instrumentation — INST 130/131 34
— Instrumentation for Supervisors — INST 903X 34
— Basic Instrumentation Electronics — INST 900 34
Introduction to Plastics — see Plastics 42
Introduction to Typography — see Typography 50
Inventory — see Production and Inventory Control 39

Jewellery Arts
— Gemmology — JWL 900 15
— Jewellery Making — JWL 901 15
— Jewellery Making (Enamelling) — JWL 902 15
— Jewellery Making (Lapidary) — JWL 903 15
Jig and Fixture
— Design I — TD 100 38
— Design II — TD 101 38
— Design III — TD 102 38
— Design IV — TD 103 38
— Jig and Fixtures I — MACH 120 39

Keypunch — see Data Processing 26

Ladies' Hairstyling — see Hairstyling 55
Lathework
— I — Basic — MACH 141A 40
— II — Intermediate — MACH 141B 40
— III — Advanced — MACH 141C 40
Law
— Business Law — AS 907 14
— Construction Law (Bylaws and Mortgages) — AS 908 14
Levelling — see Surveying 23
Lighting Fundamentals — EL 904 30
Liqueurs (Appreciation of Wines, Spirits, etc.) — F 907 49
Lithography — see Machine Printing 51

Machine Printing
— Offset Lithography, 2 Colour (Advanced) — GR 215 51
— Offset Lithography, Single Colour (Basic) — GR 115 51
— Offset Lithography, Single Colour (Basic) — GR 117 51
— Rotogravure and Flexographic (Advanced) — GR 217 51
Marketing — MARK 100 26
Materials Handling and Plant Layout Design I — DR 906 38
Mathematics
— I — MATH 100 12
— II — MATH 200 12
— III — MATH 900 12
— IV — MATH 901 12
— Numerical Methods and Digital Computations — MATH 902 12

— Pre-Advanced Technical Mathematics — MATH 134 11
— Technical Mathematics — MATH 130 12
— Statistics I (Academic) — MATH 903 12
Measuring Principles I — INST 100 34
Meat Cutting (Retail) — MC 900 46
Meat Store Management (Retail) — MC 901 47
Mechnical Maintenance — MILL 900 40
Mechanics
— I — MECH 100 13
— II — MECH 200 13
— of Materials I — MECH 110 13
— of Materials II — MECH 210 13
Medical Terminology — ANAT 100 29
Men's Hairstyling — see Hairstyling 55
Merchandising, Basic Principles of Advertising, Sales — BC 900 25
Metal — see Sheet Metal 19
Metalwork — Ornamental — WELD 909 36
Microbiology — see Sanitation 47
Milling and Shaping
— I — MACH 142A 40
— II — MACH 142B 40
Modern Physics — see Physics 13
Monotype Caster (Operating Course) — GR 200B 50
Monotype Keyboard (Basic) — GR 200A 50
Moulding
— Blow — PL 906 42
— Injection — PL 905 42
Mouldmaking I — MACH 901 41
Municipal Building Officials Course — CO 902 24

Navigation
— Celestial, for Yachtsmen — MAR 904 53
Nuclear Reactor — Technology — INST 902X 34
Numerical Control — (Mill Operation)
— Part I — MACH 902 41
— Part II — MACH 903 41
Numerical Methods — see Mathematics 12

Office Practice
— A — OP 149A 26
— B — (Stenographic) — OP 149B 26
Offset Lithography — see Machine Printing 51
Oil
— Burner, Part I — HT 130 21
— Burner, Part II — HT 131 21
— Commercial and Industrial Oil Burners — HT 901 21
Ontario Hydro Electrical Safety Code Regulations — EL 902 30
Ornamental Metalwork — see Metalwork 36
Orthotic/Prosthetic Techniques
— Above the Knee Amputations — PROS 900 44
— Below the Knee Amputations — PROS 901 45
Personnel Administration — BUS 902 29
Photocomposition (Operating Course) — GR 202 50
Photography — Audio Visual — AV 904X 14
Physics
— I — PHYS 100 13
— Applied (Technical) — PHYS 133 13
— Modern — PHYS 200 13
Pipe Welding — see Welding 36
Planned Entertaining for Pleasure — see Entertaining 49
Plastics
— Forming and Fabricating of Thermoplastics — PL 900 42
— Introduction to Plastics — PL 901 42
— Extrusion — PL 902 42
— Designing with Plastics — PL 903 42
— Compounding and Colouring — PL 904 42
— Injection Moulding — PL 905 42
— Blow Moulding — PL 906 42
— Plastic Film Production — PL 907 42
Plate and Structural Layout — DR 134 37
Plumbing
— Basic — PLUM 900 18
— Intermediate — PLUM 901 18
— Qualification — PLUM 902 18
— Design Engineering — PLUM 903 18
— Design and Installation — PLUM 904 18
Polymer Chemistry — see Chemistry 43
Practical Baking — see Baking 46
Practical Cooking — see Cooking 48

Principles of Managing Food — Part II — F 903 48
Printing — Graphic Arts 51
— see Screen Process Printing 52
Process Pipe Drafting — see Drafting
Production and Inventory Control I — TD 900 39
— Inventory Control — TD 901 39
Professional Development
— Teaching Techniques — ED 900 16
— Effective Supervision Production — ES 900 16
— Effective Supervision Construction — ES 901 16
— Effective Supervision Administration — ES 902 16
— Effective Supervision Human Relations — ES 903 16
— Effective Supervision Labour Relations — ES 904 17
— Effective Supervision Communications — ES 905 17
— Effective Supervision Municipal Government — ES 906 17
Propane Gas — see Gas 22
Psychology, Industrial — PSY 201 11
Purchasing — BC 906 29

Quality Control — GR 220 & GR 222 52
Quantity Surveying — see Surveying

Radiography — Industrial — I — TEST 903 44
— Industrial II — TEST 904 44
Radio Aids to Navigation for Yachtsmen — see Navigation 53
Reading — see English 11
Refrigeration
— Part I, Basic — REF 900 19
— Part II, Intermediate — REF 901 20
— Part III — REF 902 20
Reinforced Concrete — see Concrete 24
Retail Meat Cutting — see Meat Cutting 46
Retail Meat Store Management — see Meat Store 47

Sales (Basic Principles of Advertising, Sales and Merchandising) — BC 900 25
Salesmanship — BC 903 25
Screen Process
— Printing — SP 900 52
— Printing (Basic) — SP 901 52
Sewing — see Dressmaking 55
Sheet Metal
— Pattern Drafting, Part I — SM 900 19
— Pattern Drafting, Part II — SM 901 19
— Theory — SM 902 19
— Design and Installation — SM 903 19
Shorthand — Forkner 28
— Theory — SHF 149A 28
— Speed — SHF 149B 28
Shorthand — Machine 28
— Theory — SHM 149A 28
— Elementary Speed Level — SHM 149B 28
— Intermediate Speed Level — SHM 149C 28
Shorthand — Pitman
— Theory — SH 100 27
— Elementary Speed Level — SH 101 27
— Legal Stenographic — SH 102 27
— Intermediate Speed Level — SHP 149C 27
— Theory of Pitman Shorthand (Refresher Course) — SH 900 27
— Pitman Script — SH 902 27
— All Systems — Pitman — Machine & Gregg — SH 901 27
Signwriting — SIGN 900 18
Small Appliances — see Appliance Servicing 22
Small Boat Building — see Boat Building 53
Spirits (Appreciation of Wines, Liqueurs, etc.) — F 907 49
Standard Practices of Footwear Manufacture — SHOE 900 45
Statistics — see Mathematics 12
Stationery Engineering — see Engineering 53
Steamfitting
— Basic — STEA 900 19
— Design and Installation — STEA 901 19
— Qualification — STEA 902 19
— Pneumatic Controls, Part I — STEA 903 19
— Intermediate — STEA 904 19
Structural Design
— Basic Course — STR 900 23
— Reinforced Concrete Design — STR 218 24
Structural Steel — Design and Detailing, Part I — STR 122 24
Strictly for Entertainment — F 908X 49

Surveying
— Plane Surveying — SURV 101 23
— Engineering Surveying (Surveying and Levelling) CO 104/SURV 110 23
— Advanced Plane Surveying — SURV 201 23
— Practical Astronomy — SURV 203 23
— Legal Surveying — SURV 204 23
— Quantity Surveying and Building Construction Estimating, Part I — CO 101 24

Tape Recorders
— Video Tape Recorders Theory and Maintenance — ELTC 912A 32
— Advanced Video Tape Recorders — Theory and Maintenance — ELTC 912B 32
Tax — see Income Tax 14
Teaching Techniques — ED 900 16
Technical Drawing — see Drawing 37
Television
— Advanced Services Techniques — ELTC 911 32
— Cable Television Practice (Basic) — ELTC 913 32
— Introductory ETV and Broadcast Maintenance — ELTC 915 33
— Colour — ELTC 909 32
— C.C.T.V. and Cable T.V. Origination Course (Technical) — ELTC 919 33
Thermoplastics, Forming and Fabricating — PL 900 42
Thermoset Materials — Processes and Design — PL 125 41
Tool Design Part Time Courses 38
Tool Design Theory — TD 907 39
Typewriting
— A — 152A — (Beginners) 28
— B — TYP 152B — (Advanced) 29
— Basic — TYP 900 29
Typograph, Introduction to — GR 100 50

Ultrasonic Testing I — TEST 900 43
Ultrasonic Testing II — TEST 902 43
Unit Operation and Food Manufacturing — FT 900 47

Varityping (Advanced) — GR 910 52
Video Tape Recorders and Maintenance — ELTC 912A 32
Video Tape Recorder Theory and Maintenance — Advanced — ELTC 912B 32
Visual Media Workshop — AV 903 14

Warm Air Heating and Air Conditioning (Domestic) — HT 900 21
Watchmaking
— Electric Watch Service — WATCH 900 44
— Watchmaking — WATCH 901 44
— Watchmaking (Advanced) WATCH 902 44
Welding
— I — WELD 900 35
— II — WELD 901 35
— Aluminum (Canadian Welding Bureau) — WELD 912 37
— Inert Gas (Heliarc) — General — WELD 910 36
— Maintenance — WELD 908 36
— Pipe Welding A — Uphill Arc Welding — WELD 904 35
— Pipe Welding B — Downhill Arc Welding — WELD 905 35
— Pipe Welding C — T.I.G. (Heliarc) — WELD 906 36
— Pipe Welding D — Oxy-Acetylene — WELD 907 36
— Pre-Certification A (C.W.B.) — WELD 902 35
— Pre-Certification B (Dept. of Labour) — WELD 903 35
— Weld Testing and Inspection — WELD 911 36
Wine Making for the Amateur — F 909X 49
Wines (Appreciation of Spirits, Liqueurs, etc.) — F 907 49
Workshop Technology — MACH 110 39

Yacht Design Course — see Boat Building 53
Yachtsmen
— Engines for — see Engines 53
— Navigation Aids — see Navigation 53

TRAINING IN INDUSTRY
— Part I — Skill Courses for Office and Plant 10
— Part II — Management Development Program 10
— for Details consult 10

ALPHABETICAL TABLE OF CONTENTS

ADVANCED TECHNICAL EXTENSION COURSES

For General information on ATEC courses see page 56.
Algebra — see Mathematics
Alternating Current Circuits — EL 906 30
Automatic Control Principles II — INST 300 34
Business Law — see Law 14
Computations — see Mathematics 12
Computer
— Control Principles — INST 203 34
— Digital Computer Principles — ELTC 906 32
Chemistry
— General — CHEM 100 43
— Polymer — CHEM 210 43
Construction Law — see Law 14
Construction Materials — CIV 100 24
Die
— Design I — TD 100 38
— Design II — TD 201 38
— Design (Moulds) — TD 203 39
Diemaking — MACH 204 40
Drawing
— Technical I — DR 100 37
— Technical II — DR 903 38
Economics — EC 100 11
Electrical
— Drafting (Basic) — EL 903 30
— Fundamentals — EL 905 30
— Alternating Current Circuits — EL 906 30
Electronic(s)
— Circuits — ELTC 905 31
— Fundamentals (Transistors I) — ELTC 904 31
English
— I — ENG 100 11
— II ENG 200 11
Foundations — see Construction Materials 24
General Chemistry — CHEM 100 43
Industrial Psychology — PSY 201 11
Jig and Fixture
— Design I — TD 100 38
— Design II — TD 101 38
Law
— Business — AS 907 14
— Construction (Bylaws and Mortgages) — AS 908 14
Mathematics
— I — MATH 100 12
— II — MATH 200 12
— III — MATH 900 12
— IV — MATH 901 12
— Numerical Methods and Digital Computations — MATH 902 12
— Technical — MATH 130 12
— Statistics — MATH 903 12
Measuring Principles II — INST 100 34
Mechanics
— I — MECH 100 13
— II — MECH 200 13
— of Materials I — MECH 110 13
— of Materials II — MECH 210 13
Modern Physics — see Physics 13
Numerical Methods — see Mathematics 12
Physics I — PHYS 100 13
Physics, Modern — PHYS 200 13
Polymer Chemistry — see Chemistry 43
Pre-Advanced Technical Mathematics — see Mathematics 11
Statistics — see Mathematics 12
Surveying — SURV 101 23
Technical Drawing — see Drawing 37
Workshop Technology — MACH 110 39

CREDIT SUBJECTS FOR CANADIAN INSTITUTE OF QUANTITY SURVEYORS 1971-72

Upon satisfactory completion of any of the following courses (and subject to the footnotes) students may apply for exemption from the applicable CIQS examinations.

Architectural Drafting Part I — DR 900 22
Bookkeeping — AC 900 25
Construction Law — AS 908 14
Construction Methods and Materials — CO 901 24
Economics — EC 100 11
Quantity Surveying (Part I) and Building Construction Estimating (Quantities Part I) — CO 101 24
Reinforced Concrete Design — STR 218 24
Structural Steel Design and Detailing Part I — STR 122 24
Surveying Part I — CO 104/SURV 110 23

Footnotes

Upon satisfactory completion of both "Structural Steel Design and Detailing Part I" and "Reinforced Concrete Design" students may apply to the C.I.Q.S. for exemption from their examinations in "Basic Design" and "Structural Steel and Reinforced Concrete".

Those students who wish to study C.I.Q.S. examination subjects not listed should make enquiries at the time of enrolment. Suitable courses may be arranged provided the enrolment meets minimum requirements.

CREDIT COURSES FOR ASSOCIATION OF SURVEY TECHNICIANS AND TECHNOLOGISTS

The following credit courses are offered by George Brown College:

Advanced Plane Surveying — SURV 201 23
Practical Astronomy — SURV 203 23
Legal Surveying — SURV 204 23

Courses are being coordinated through the office of the Association. All students interested in these courses should direct their enquiries to:

The Education Committee
Association of Certified Survey Technicians and Technologists
Suite 903
8 King Street East
Toronto
Telephone — 364-6898

TRAINING IN INDUSTRY

PART I — SKILL COURSES FOR OFFICE & PLANT

The College has assisted hundreds of employers, labour organizations and other groups to train their people in a new skill or to up-date and improve present skills in both office and plant situations.

At your convenience, one of our Consultants will meet with you and your staff at your office for the purpose of setting up any skill training course with a special syllabus "tailored" to your particular training requirement.

The instructor will be provided at no cost to you. He will have considerable pertinent work experience along with the essential teaching techniques.

The course is usually held on your premises. On-premise training has two major advantages for you and your organization. Since the trainees go directly from their work situation to the class, there is no loss of time as compared to the travelling time required for off-premise training. Coupled with the elimination of travelling time the on-premise training assures 100% attendance.

Classes are held before, during, or immediately after the working hours according to your training needs.

The "tailored" syllabus has proven by past experience to be essential in fulfilling your training needs, and because of the individual course "tailoring" it is not possible to list all of the hundreds of courses that have been successfully conducted.

Certificates are presented upon successful completion of a course. There are no tests or examinations, unless requested.

PART II — MANAGEMENT DEVELOPMENT PROGRAM

This College program is offered to business and industry with the aim of improving competitive performance through the use of modern management techniques.

The syllabus of each course was developed to meet the particular needs of potential supervisors, supervisors, foremen, department heads, managers and owners.

Training sessions can be held before, during or after working hours.

The program is developed into three subject areas:— Human Resources, Marketing and Material Resources.

1. HUMAN RESOURCES

The courses in this subject area have been developed to help people understand and deal more effectively in employee relations.

With a minimum of 15, or more participants the course can be held on the company premises. All courses are of 20 hours duration at an approximate cost of $30.00 per participant. Ten two-hour sessions held once weekly over 10 weeks has proven to be most effective training. Arrangements can be made for your course to be held on a seminar basis.

Recommended Courses:
Effective Supervision, Production
Effective Supervision, Administration
Effective Supervision, Construction
Employee Relations (Organizational & Motivational Development)
Communications
Personnel Management
Labour Relations

2. MARKETING

Retail selling and professional selling stress the role of the salesman or saleswoman in the 1970's.

These courses are of 20 hours duration. The cost and the training sessions are organized similar to the human resource courses described above. Recommended courses are Psychology of Professional Selling and Retail Selling.

3. MATERIAL RESOURCES

There are two courses in this section dealing with the handling of materials and operations for greatest productivity and profitability.

1. The **Work Study Course** is made up of method study and work measurement — otherwise known as method and time study.
   This course is 60 hours in length at an approximate cost of $100.00 per participant.
2. The **Work Simplification Course** deals with principles of work simplification. The course has been designed to offer the participant an approach to productivity improvement which combines participation and involvement with rigorous analysis.
   This course is 24 hours in length at an approximate cost of $40.00 per participant.

Complete information regarding all phases of the services available may be obtained by calling Training in Industry, George Brown College, telephone no. 921-4550 or 362-3971, locals 365, 366, 367.

ACADEMIC STUDIES

ENGLISH TECHNICAL — ENG 130

This course is related to trade and business English. The work covered will be equivalent to that taken by an apprentice proceeding to journeyman status.

Part I

Parts of Speech — Their function and relation to each other. A study of the errors commonly made with each group.
Use of Words in Sentences — Qualities of good sentences; unity, clarity, correctness and order of words, variety in sentence structure for effective writing.
Expressing Ideas in Paragraphs — Qualities of a good paragraph; unity, coherence and emphasis. Paragraphs on trade topics, trade tools and equipment. Oral and written exercises.

Part II

Analysis and Precis Writing — Passages from trade texts, periodicals, specifications and other sources to be rewritten in precis form.
Short Reports in Essay Form — Descriptive writing of a technical nature on installations, tools and processes. Technical writing — reports on an accident, defective parts and the technical research essay.
Letter Writing — Applications for jobs, requests for material and replies to letters of complaint.
Comprehension and Speed Reading — Practice with Developmental Reading and S.R.A.
Speech — Oral Reading and the preparation and delivery of short speeches.
Tuesday — 7:00 to 10:00 p.m. 60 hours. Campus K.

RAPID READING — ENG 900 X

This course is designed to help you improve your rate of reading and also your level of comprehension.
The course is in two sections and is executed in an up-to-date language laboratory.
During the first section of the course you will receive a diagnostic analysis of your present reading level. Based on the results of the diagnostic analysis of your present reading level an individualized program will be devised to correct reading difficulties.
In the second section emphasis will be placed on reading improvements to raise your reading speed and level of comprehension.
You will also learn the modern methods of information processing.
Tuesday — 7:00 to 10:00 p.m. 30 hrs. Campus T. Fee — $26.00.

ENGLISH I — ENG 100 — A.T.E.C. COURSE (Approved)

The purpose of the course is to assist the student to express himself in simple, clear, correct English.
Oral and written communication. The development of clear, concise, well-organized communication with specific application to technical writing and oral presentations. Contemporary ideas — a study of modern literature and current issues.
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

ENGLISH II — ENG 200 — A.T.E.C. COURSE (Approved)

Prerequisite — ENG 100
The aim of the course is to enable the student to use the English language with greater skill, facility and precision. The preparation of formal talks and lectures on technical subjects. The philosophy of good writing. Technical research, study of basic library resources used in research. The technical report, organization and format, assigned reading.
Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

ECONOMICS (Outline of Economics) — EC 100 — A.T.E.C. COURSE (Approved)

Course Content — Basic economic problems, supply and demand, business units, personal finances, money and banking, labor, international trade, business cycles and national accounts, social services.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

INDUSTRIAL PSYCHOLOGY — PSY 201 — A.T.E.C. COURSE (Approved)

The aim of this course is to help students understand human behaviour. The following topics will be studied and discussed: learning theory, motivation, emotion, perception, personality theory, psychological measurement.
Wednesday — 7:00 p.m. to 10:00 p.m. 60 hrs Campus T.

PRE-ADVANCED TECHNICAL MATHEMATICS — MATH 134 — A.T.E.C. COURSE (Approved)

This course is designed for tradesmen, apprentices and persons desiring a course in trade mathematics.
Course Content — Whole numbers, fractions and decimals, easy percentages, simple interest, loans, financing, discounts, trade problems in linear measure, area and volume, elementary algebraic process, solution of equations and simple formulae, principle of the slide rule and elementary operations.
Monday — 7:00 p.m. to 10:00 p.m. 60 hrs. Campus K.

TECHNICAL MATHEMATICS — MATH 130 — A.T.E.C. COURSE (Approved)
Review of arithmetic processes. Mensuration of areas and solids of various sizes and shapes with practical examples. Algebra — index laws, equations of first degree and second degree, factoring, powers of quadratics, logarithms, surds. Slide rule, geometric construction, the right angle triangle, Pythagorean theorem. Application of the common theorems involving lines, triangles, circles, arcs and segments to practical problems.
Trigonometry — the right angle triangle, reciprocal ratios, complementary ratios, basic trigonometry formulae to include derivation and practical application.
Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

MATHEMATICS I — MATH 100 — A.T.E.C. COURSE (Approved)
Prerequisite: Grade 12 Mathematics, Math 130, or equivalent.
Computations with measured quantities: exact and approximate numbers, scientific notation, analysis or error, slide rule and tables.
Algebra: Linear functions, systems of linear functions, determinants, quadratic functions.
Logarithms: Logarithmic and exponential functions, applications.
Trigonometry: Trigonometric functions, application to mechanical and electrical problems.
Series and progressions.
Analytical Trigonometry: Complex numbers, vector algebra.
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

MATHEMATICS II — MATH 200 — A.T.E.C. COURSE (Approved)
Prerequisite — MATH 100 or equivalent.
Binomial theorem. Notational Systems, Analytic Geometry: the straight line, loci, conics, general second degree equations. Differential Calculus: limits, the derivative slope, rate of change, maxima and minima of functions. Graphical Analysis. Integration: anti-differentiation, the indefinite integral, the definite integral, interpretation of the definite integral.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

MATHEMATICS III — MATH 900 — A.T.E.C. COURSE (Approved)
Prerequisite — MATH II
Differential calculus — functional notation, gradients, limiting value, differentiation from first principles: maxima and minima; differentiation of products and quotients of trigonometric functions with application to angular velocity and acceleration, simple harmonic motion, and electrical problems. Integral calculus — relationship between differentiation and integration; the definite integral areas; volumes by integration; integration of trigonometric functions; centre of gravity and centroids with applications; application of calculus to problems encountered in industry and in related subjects.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

MATHEMATICS IV — MATH 901 — A.T.E.C. COURSE (Approved)
Prerequisite — MATH 900 or equivalent
Differentiation of exponential and logarithmic functions — applications to engineering problems. Moments of inertia, radius of gyration; second moment of area. The rod, rectangle, disc and cylinder. Parallel axis theory; perpendicular axis theory. Review centre of gravity and centroids: Theorems of Pappus. Standard methods of integration, such as substitution, trigonometric identities, partial fractions and parts. Radius of curvature; lengths of curves. Expansion in series; MacLaurin's Theorem. Differential Equations — simple differentiation equations of the first and second order. Complex Numbers — included as required for students specializing in Electrical or Electronic Technology.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

NUMERICAL METHODS AND DIGITAL COMPUTATIONS — MATH 902 — A.T.E.C. COURSE (Approved)
Prerequisite — MATH 900
Course Content — Systems of Notations. Mathematics of computations; constants, variables and expressions, input — arithmetic statement; output — control statements; logical statements; subscribed variable; functions; writing, punching and running a program, rounding and truncation errors; roots of equations; simultaneous linear equations; interpolation, numerical differentiation and integration; Taylor's series; curve fittings.
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

STATISTICS I — MATH 903 — A.T.E.C. COURSE (Approved)
Prerequisite — MATH III
Broadly speaking statistics can be divided into two main types: descriptive statistics, meaning tabular or graphical presentation of data as a source of information; and inductive statistics, the object of which is to make generalizations of predictions by calculation from numerical data. It is inductive statistics with which this course should be mainly concerned; but for interest, descriptive statistics should be considered briefly. Course Content — The major topics of the course are: Introduction — descriptive and inductive statistics, terms and definitions, sigma notation. Frequency distributions. Measures of location and dispersion. Probability concepts. Theoretical distributions, binomial, normal and Poisson. Sampling distributions. Control charts for means, range, attributes, proportions and percent defectives. Problems of estimation.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

APPLIED PHYSICS (TECHNICAL) — PHYS 133
Prerequisite — Grade 10 or equivalent.
Air — Physical and chemical properties, pressure and vacuum, measurement of pressure, the barometer, the manometer, absolute pressure, gauge pressure.
Water — Physical and chemical properties, density and specific gravity, calculation of pressure at a depth, capillarity, pH factor.
Heat — Temperature scale, heat transmission, radiation, convection, conduction, the B.T.U., latent heat, coefficient of expansion, mechanical equivalent of heat, heat loss and prevention.
Gas Laws — Expansion and compression of gases, Boyle's law, vacuum pump, the compression pump.
Hydraulics — Fluids under pressure, action of pressure pumps, action of the venturi, the Water Hammer.
Properties of Materials — Basic metallurgy, ferrous and non-ferrous metals, heat treatment.
Machines — Principles, efficiency, levers, inclined plane, gear drives, belt and chain drives.
Work energy and power — Units of energy and power, horsepower.
Strength of Materials — Stress and strain, safety factor, Young's Modulus.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

PHYSICS I — PHYS 100 — A.T.E.C. COURSE (Approved)
Prerequisite — MATH 100 or equivalent
Properties of matter, mechanics — force, motion, speed, velocity, acceleration, projectiles, momentum, simple machines, work, friction, elasticity; heat — temperature measurements, heat transfer, expansion, heat units, latent and super heat. Sound waves; light — intensity, inverse square law, speed of light; ray optics, wave optics, including lenses, interference, diffraction and polarization.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

MODERN PHYSICS — PHYS 200 — A.T.E.C. COURSE (Approved)
Prerequisite — MATH 900 and PHYS 100
Course Content — Electro Magnetism: Electrostatics, Electromagnetics, change, practical ballistics, electromagnetic waves and spectrum. Atomic Physics — Periodic Table (Physical point of view). Emission and Absorption of Radiant Energy, early structure of an atom, quantum theory, waves of particles, Bohr atom and line spectra. Modern atomic model and Schroedinger Wave Equation. Physics of the solid state — crystaline solids, experimental methods of determining crystal structure, classification by structure, classification binding energy displayed, electronic structure of solids. Structure and behaviour of metals, structure and behaviour of semi-conductors, semi-conductor devices, nuclear physics.
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

MECHANICS I — MECH 100 — A.T.E.C. COURSE (Approved)
Prerequisite — MATH 100 or equivalent (prior to or concurrent with Mechanics I).
Statics — Basic principles of statics; coplanar, collel and concurrent force systems; friction; centroids and centres of gravity; second moments of areas. Dynamics — basic principles, rectilinear motion, work, energy and power; impulse, momentum, impact.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

MECHANICS II — MECH 200 — A.T.E.C. COURSE (Approved)
Prerequisite — MECH 100 and MATH 900
Statics — Review of force systems — coplanar, non-coplanar, parallel, non-coplanar concurrent, non-coplaner non con-current. Friction. Dynamics — relative velocity; torque, angular motion and energy; motion in a circular path; simple harmonic motion; pressure of liquids; flow of water.
Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

MECHANICS OF MATERIALS I — MECH 110 — A.T.E.C. COURSE (Approved)
Prerequisite — MATH 200 and MECH 100
Mechanical properties and testing; unit stress and strain; beam type members — statically determinate; beam type member design; deflection due to bending; thin cylinders and joints; resilience; torsion; combined stresses.
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

MECHANICS OF MATERIALS II — MECH 210
Prerequisite — MECH 110 and MATH 900
Fatigue and stress concentration, statically determinate members, statically indeterminate members, properties of materials, columns, combined stresses, thick walled and compound cylinders.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

INCOME TAX AND THE LAYMAN — EC 900 X
A course especially designed to help you, the taxpayer, cope with your income tax problems. The course will provide the answers to questions concerning the following:

Who is taxable
What deductions can be claimed
How certain types of income are taxed
Different forms of taxes
Liability for tax
Ontario Succession Duties
How to file your return
Why make out wills
How to obtain relief from taxes

Thursday — 7:00 to 10:00 p.m. 30 hrs. Campus CL.
Fee: $26.00. Course commences in the second term. Consult General Information.

BUSINESS LAW — AS907
A summary of our laws of contract, employment, agency, sales of goods, insurance, bailments, real estate, negotiable instruments, partnerships, Corporation, bankruptcy, trade marks, business crimes and torts.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus T. Fee: $26.00.

CONSTRUCTION LAW — AS908
Course Content — Construction laws and bylaws, contracts, engineering agreements, labour laws including industrial relations and trade disputes, Workmen's Compensation, patents and inventions, trade marks, industrial designs and copyrights, company law, boundaries and surveys, easements, building trades protection, factory and shop acts, mortgages, mechanics' liens.
Textbook — Engineering Law by Laidlaw, Young and Dick. University of Toronto Press.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

COMMUNITY DEVELOPMENTAL STUDIES — AS 909
This course is designed to further the professional development of those engaged or interested in community work.
Course Content — Analytic study of communities, organizations and governments. The analysis of current social problems. Planning and execution of strategy and tactics. Human relations and the dynamics of change. Seminar workshops to study contemporary urban problems and issues.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus T. Fee: $26.00.

COMMUNICATIONS MEDIA TECHNOLOGY:

AUDIO VISUAL THEORY IN TEACHING TECHNIQUES — AV 901
A course designed for school teachers, instructors in industry, and technical or sales supervisors engaged in directing or organizing modern media presentation.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus T. Fee $40.00.

AUDIO VISUAL WORKSHOP — AV 902
An intensive course for the acquisition of skills in the preparation of A/V materials. This course is suitable for the novice as well as A/V technicians already working in this field, and who wish to acquaint themselves with the latest techniques. (90% practical work).
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus K. Fee — $50.

VISUAL MEDIA WORKSHOP — AV 903
Prerequisite — A/V workshop or equivalent experience.
An advanced course for the perfection of skills in the production of slides, transparencies and other projected visuals. (90% practical work.).
Tuesday & Thursday — 7:00 to 10:00 p.m. (Commencing March 1972) Campus K — 60 hrs. Fee — $75.

AUDIO VISUAL PHOTOGRAPHY — AV 904X
Designed to provide the beginner with a knowledge of how and why of photography and the advanced with a better understanding of the elementary principles of the photographic processes. A comprehensive approach to photographic optics and exposure, emulsions, filters and lighting, film and print processing and camera techniques.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus K. Fee — $50.

CREATIVE FILM WORKSHOP — AV 905
An overview of 16mm and 8mm film production. Designed to give the student insight and practice in lighting, shooting, sound mix, animation and editing. Guest lecturers and demonstrations by experts from the film industry.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus T. Fee — $40.

C.C.T.V. AND CABLE T.V. ORIGINATION COURSE — AV 906
This course is a practical seminar which covers the essential elements in the production of industrial and educational programs for CCTV and videotaping.
Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus T. Fee — $40.

AUDIO GENERAL — AV 907
An introduction to audio techniques; useful to the home hobbyist as well as persons using this medium in education or industry.
Wednesday — 7:00 to 10:00 p.m. Campus T. Fee: $50.00.

APPLIED ARTS

DENTAL TECHNICIAN
Complete Denture Prosthesis — DENT 900
Partial Denture Construction — DENT 901
Orthodontics — DENT 902
Crown and Bridgework — DENT 903
Ceramics and Ceramics to Metal — DENT 904
Applied Science (Dental Materials) — DENT 905
Business Management — EC 902

These courses are offered to technicians who are working at present in a dental laboratory or for a dentist. They cover the work as it is presented in our Dental 100 Day Course. Theory and practical work in these courses is offered for 3 hour sessions each evening.

Monday	DENT 904	Ceramics and Ceramics to Metal
Tuesday	DENT 901	Partial Denture Construction
Monday	DENT 900	Complete Denture Prosthesis
Wednesday	DENT 902	Orthodontics
Thursday	DENT 903	Crown and Bridgework

Applied Science (Dental Materials), DENT 905, and Business Management, EC 902, will also be offered in 1971-1972.

Every attempt will be made to provide each student with the instruction and experience he most needs on an individual basis.
As above — 7:00 to 10:00 p.m. 90 hrs. Campus CL.

JEWELLERY ARTS

GEMMOLOGY — JWL 900
Prerequisite — Applicans may either be employed in the jewellery industry or be interested in jewellery design as a hobby.
This course is offered in close co-operation with the Gemmological Association of Great Britain. The course is taken during two successive winters and upon successful completion of the two examinations the Fellowship of the Association will be granted.
Materials and books $100.00 per session.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.

JEWELLERY MAKING — JWL 901
Prerequisite — Currently employed in the jewellery industry or hobbyists.
Course Content — Planishing, hard soldering, finishing and polishing of precious metals, elementary jewellery repairs, shaping and forming settings for coloured stones and pearls, transferring designs to metals, cuttlefish casting, centrifugal casting, making models for fast production methods, handmaking of rings, brooches, pendants, earrings and bracelets.
Available Mon., Tues., Wed., or Thurs. — 7:00 to 10:00 p.m. 60 hrs. Campus CL.

JEWELLERY MAKING (Enamelling) — JWL 902
The study and practice of various techniques in the use of vitreous enamels, such as cloisonne, plique-a-jour and champleve, on copper and fine silver, with emphasis on creative design and setting of delicate pieces into jewellery. For beginner and experienced student. Individual instruction provides the opportunity for the student to develop skills at his own pace.
Thursday 7:00 to 10:00 p.m. 60 hrs. Campus CL.

JEWELLERY MAKING (Lapidary) — JWL 903
Prerequisite — For those who are interested in cutting and polishing gem stones.
Course Content — Cutting gem material with diamond saw, grinding and lapping practice. sanding and polishing gem material; materials used for polishing and their uses, dopping procedure, orientation of gem stones, selecting rough material, theory of facet cutting. comparative hardness of materials.
Monday and Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.

PROFESSIONAL DEVELOPMENT

TEACHING TECHNIQUES — ED 900

This course is designed for people in industry, commerce professions and adult education who have an interest in the instruction of other people. It is a basic course combining a minimum of pedagogical theory with practical instructional technique.
Course Content — Theories of learning — adult learning — individual differences — subject analysis — lesson planning — curriculum development — lesson types — teaching aids — evaluation — practice teaching — critical appraisals of teaching techniques.
Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus CL. Fee: $26.00.

SPECIAL COURSES IN SUPERVISION

The following courses are designed to provide additional training for those who are employed in the supervisory field or are considering employment in this area. Classes will meet one evening a week for ten weeks and may be conducted either at George Brown College or on company premises.

EFFECTIVE SUPERVISION — PRODUCTION — ES 900

This course covers a broad segment of industrial supervision presenting the philosophical and elementary technology background. It is designed especially for the Supervisor and Foreman.
The four specific objectives are:
to identify the supervisor's function; to reduce waste of human and financial resources; to reduce basic work and material content and to improve the motivational climate of the organization.
The ten sessions are: The role of the Supervisor — Principles of Effective Supervision — Initiating Proper Action — Motivation of the Worker — Setting Objectives and Goals — Planning — Scheduling — Measuring Results and Evaluating Efficiency — Improvements — Getting a Day's Work Done.
The case study method will provide the subject matter for each session.
Monday — 7:00 to 9:30 p.m. 25 hrs. Campus CL Fee $30.00.

EFFECTIVE SUPERVISION — CONSTRUCTION — ES 901

The Construction Supervision Course has as its objective the increased effectiveness of the Supervisor and Foreman in a mechanical, electrical or general contracting job. The course covers the fundamental activities of a manager, including production, planning and control techniques which are related to this type of work. These are taught in a series of case studies set in appropriate construction situations.
In keeping with modern control techniques, the student is introduced to Critical Path Method and is taught to use it as an aid to effective project management. The course is ten sessions in length, each of approximately two hours duration.
Tuesday — 7:00 to 9:30 p.m. 25 hrs. Campus CL. Fee: $30.00.

EFFECTIVE SUPERVISION — ADMINISTRATION — ES 902

The objective of this course is to improve the ability of the supervisor. It is designed for supervisors in administrative, office, clerical, professional, technical, financial and commercial fields. It will be beneficial to those in both profit-oriented and service industries, in government organizations, in small, medium or large enterprises. The Administrative Supervision Course can be taken in place of the Production or Construction courses.
The ten sessions: The Role of the Supervisor — Principles of Effective Supervision — Analyzing the Problem — Setting Objectives and Goals — Organizing and Planning — The Human Factor — Flow of Information — Improvement — Evaluation Operations and Controlling Activities — Managing High Talented Personnel.
In each session the student will apply problem solving techniques to a typical administrative situation.
The material provided includes up-to-date ideas in productivity improvement and systems analysis.
The course is ten sessions in length, each of approximately two hours duration.
Monday — 7:00 to 9:30 p.m. 25 hrs. Campus CL. Fee: $30.00.

EFFECTIVE SUPERVISION — HUMAN RELATIONS — ES 903

The objective of this course is to help the supervisor to deal effectively with his problems in the area of personnel management. Using the case method, the student in effect learns by "doing" and studies Human Relations in accordance with modern management concepts. The cases include a cross-section of incidents in various business concerns.
The ten sessions are: Understanding people — Selection and Induction — Training Employees — Developing and Maintaining Morale — Elements of Wage and Salary Administration — Effective Communications — Appraising Employee Performance — Discipline and Corrective Action — Understanding the Collective Agreement — Planning and Organizing for Results.
Two alternate sessions are available: Leadership — Resistance to Change.
Wednesday — 7:00 to 9:30 p.m. 25 hrs. Campus CL. Fee: $30.00.

EFFECTIVE SUPERVISION — LABOUR RELATIONS — ES 904

This seminar is designed to help the Supervisor and Foreman deal effectively with aspects of labour relations, both where collective agreements have already been established and where certification may become possible.
The student will study this very important subject by working through a series of "case studies", each case specializing in a particular problem. Various businesses are considered in order that the class gain experience in a variety of settings.
The course consists of ten sessions (each of approximately two hours duration) entitled: Employer — Employee — The Relationship — Establishment of Bargaining Rights — Negotiations for a Contract — Content of Collective Agreement — Union Security — Management Rights — Complaints — Grievances and Arbitration — Wages — Classification and Benefits — Relationship Arising out of Contracts — Administration of the collective Agreement.
Tuesday — 7:00 to 9:30 p.m. 25 hrs. Campus CL. Fee: $30.00

EFFECTIVE SUPERVISION — COMMUNICATIONS — ES 905

This course has been designed to make the supervisor aware of the importance of communications. It is recognized that a basic need of all managers is that they be able to communicate.
The course is ten sessions in length and will give ample practice in the methods of effective communications, together with the reasons for their use.
The ten sessions are: Communication: Its Meaning and Definition — Communication: Problems through several Levels — Communication: Additional Problems — Communication is a Two Way Street — Communication through conservation — Let Us Learn to Listen — Communication through Practice — Barriers to Communication — Verbal Communication — Rules of What and How — The Written Communication.
Thursday — 7:00 to 9:30 p.m. 25 hrs. Campus CL. Fee $30.00.

SUPERVISORY PRACTICES IN MUNICIPAL GOVERNMENT

MUNICIPAL GOVERNMENT — ES 906

This is a 15 week course on being a supervisor in a civic government department.
It will be taught with the case study method; once a week for 2 to 2½ hours.
The major topics covered are:

Unit I	Elements of Supervision
Unit II	Leadership
Unit III	Management needs Organization and Management Ideas
Unit IV	Job Planning
Unit V	Getting Action
Unit VI	How to improve methods
Unit VII	Induction of new employees
Unit VIII	How to Develop and Maintain Discipline
Unit IX	The Supervisor as a Counsellor
Unit X	Complaints and Grievances
Unit XI	Appraisal
Unit XII	On the Job Instruction
Unit XIII	Safety
Unit XIV	Cooperation within the Civic Service
Unit XV	Human and Public Relations

Monday — 7:00 to 10:00 p.m. Approx. 38 hrs. Campus CL. Fee: $45.00.

ARCHITECTURAL TECHNOLOGY

BRICKLAYING — MAS 900
Prerequisite — This course is for tradesmen interested in improving and upgrading their skills and also for laymen who are interested in the trade.
Course Content — Bonds, preparation of mortars, layout of different types of walls, piers, pilasters, tools and equipment, types of bricks with characteristics and sizes, sand, lime and cement, methods of storage preparation of mortars in cold weather.
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

CABINET-MAKING — CAR 900
Prerequisite — Familiarity with the fundamentals of cabinet making or woodworking machinery.
Course Content — Conditioning and use of hand tools and machines, joints and methods used in cabinet making, layout and design.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

CARPENTRY I — CAR 901
Prerequisite — Proof of work experience in the construction industry.
Course Content — House framing and roofing, National Building Code.
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

CARPENTRY II — CAR 902
Prerequisite — Carpentry I
Course Content — Basic stair design and layout, concrete practice, supervisory responsibilities.
Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus K.
Starting October 1970.

SIGNWRITING — SIGN 900
This course is designed to give the fundamentals of general signwriting and the hand-cut silk-screen process. Course Content — Basic lettering strokes, alphabets, colour theory and the principles of good layout. Elementary silk-screen process.
Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

PLUMBING BASIC — PLUM 900
Course Content — Measuring pipe, pipe materials, drainage terms, fundamentals of drainage design, stack terms, footings and terminals, traps and trap seal loss, vents and venting, wastes, sizing, prohibited fittings and connections.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

PLUMBING INTERMEDIATE — PLUM 901
Course Content — Stack, wet, loop and circuit venting, stack elevation work, grease and oil interceptors, sewage tanks, floor drains, drain plans, water services and meters, B.T.U's, pressures and heads.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

PLUMBING QUALIFICATION — PLUM 902
This is designed as a refresher course in general plumbing theory and code (Provincial) for those required to write the Ontario Certificate of Qualification examination.
Two nights per week — Tuesday and Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

PLUMBING DESIGN ENGINEERING — PLUM 903
This course is intended to provide design draftsmen, plumbing foremen and plumbers with the fundamentals of plumbing and drainage design and the basic understanding of principles and practices used in plumbing engineering.
Course Content — Roof and area drainage, manhole and catch basins, flow-in open channels and conduits, water pipe sizing, flow co-efficients, demand flow; hot water generators and storage tanks, water hammer, sewage pit sizing and pump selection, pump controls, heads and curves, selection of plumbing fixtures, locations for soil waste and vent stacks.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

PLUMBING DESIGN AND INSTALLATION — PLUM 904
This course is designed for those wishing to prepare themselves for the responsibility of a master plumber.
Prerequisite — Journeyman's licence or Ontario Certificate of Qualification.
Course Content — Review of legislation relevant to the construction industry. Examination discussion and interpretation of the Ontario Plumbing Code. Mathematics and physics necessary to understand design problems. Discounts, overhead and profit applications.
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

SHEET METAL PATTERN DRAFTING, Part I — SM 900
This course is designed for apprentices and beginners and covers the basic principles of pattern drafting.
Course Content — Use of drafting equipment by parallel line and radial line developments, oblique cylinder by parallel line method, segmental elbows, by parallel line and radial line methods, oblique cone by radial line method.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

SHEET METAL PATTERN DRAFTING, Part II — SM 901
Prerequisite — Previous pattern drafting experience.
Course Content — Regular and irregular tapers, square to round and other transition pieces, tapered elbows of different sections, streamlined fittings, double and multiple branches of different sections, all by triangulation method.
Wednesday 7:00 to 10:00 p.m. 60 hrs. Campus K.

SHEET METAL THEORY — SM 902
This course is designed to assist apprentices failing to qualify for advancement in the apprenticeship program and also for those preparing to write the Certificate of Qualification Examination.
Two nights per week — Tuesday and Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

SHEET METAL DESIGN AND INSTALLATION — SM 903
This course is designed for those who wish to prepare themselves for the responsibilities of a master sheet metal worker.
Prerequisite — Currently employed in the sheet metal industry with a journeyman standing.
Course Content — Labour legislation in relation to the construction industry — city bylaw, underwriters, definition of terms applied to heating and air conditioning, use of N.W.A. and A.C.A. manuals for heat loss and heat gains, pipe sizing and location of outlets and inlets in residential installation, types of fans, air flow and types of instruments used, calculations in ventilation requirements, heating and pipe sizing by velocity, use of charts and tables.
Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

STEAMFITTING BASIC — STEA 900
Course Content — Relevant mathematics and physics, measuring pipe, valves, boilers, gravity and forced hot water, pumps, one pipe systems, baseboard heating, radiant heating, controls, hydrostatics and hydraulics.
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

STEAMFITTING DESIGN AND INSTALLATION — STEA 901
This course is designed for those wishing to prepare themselves for the responsibilities of a master steamfitter or who wish to pursue the trade beyond the journeyman level.
Course Content — Review of hot water and steam systems, introduction to labour legislation pertaining to building trades, codes and regulations, heat loss calculations, radiation selection, design of heating systems, control of systems, introduction to air conditioning.
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

STEAMFITTING QUALIFICATION — STEA 902
Offered as a refresher course in general steamfitting theory for those required to write the Certificate of Qualification examination.
Two nights per week — Tuesday and Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

STEAMFITTING PNEUMATIC CONTROLS, Part I — STEA 903
This course is designed for journeymen steamfitters who wish to broaden their knowledge in this specialized field.
Course Content — Elements of control, advantage and performance of pneumatic controls, control drawings, pipe installations, control theory, control applications, control adjustments, air compressors, maintenance of controls.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

STEAMFITTING INTERMEDIATE — STEA 904
Course Content — Convertors, boiler controls and accessories, steam traps, vacuum pumps, selector and thermostats, high and low pressure systems.
Wednesday — 7:00 p.m. to 10:00 p.m. 60 hrs. Campus K.

REFRIGERATION, Part I, Basic — REF 900
Prerequisite — Applicants should be employed in the refrigeration industry or some allied trade.
Course Content — Refrigeration fundamentals and principles, compression system of refrigeration, properties of refrigerants, metering devices, expansion valves, evaporators, condensers, compressors, flow equipment, electric controls and control valves, lubrication, servicing (charging and evacuation), trouble shooting problems, shop demonstrations of silver brazing.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

REFRIGERATION, Part II, Intermediate — REF 901

Prerequisite — Successful completion of REF 900 or equivalent experience.
Course Content — Review of fundamentals, defrosting methods, compressor drives, instruments and meters, piping and refrigerant lines, pressure drops, heat calculations refrigerated enclosures, survey or refrigeration applications, humidity in refrigeration, cooling load calculations, secondary refrigerants, liquid cooling, absorption systems, codes and by-laws, safety precautions.
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

REFRIGERATION, Part III — REF 902

This course is designed to help prepare the student to write the Certificate of Qualification Examination.
Prerequisite — REF 901
Course Content — Roof top condensers, piping systems, brines, pumps, chillers, centrifugal compressors, heat pumps, symbols, starts and contactors, packaged units, humidifiers, dehumidifiers, spray apparatus, ponds, air cleaning equipment electronic and curtain, odour control. Load calculation, commercial and air conditioning, selection of equipment, pneumatic systems, control circuitry, trouble shooting, safety.
Tuesday — 7:00 to 10:00 p.m. 90 hrs. Campus K.

AIR CONDITIONING DESIGN — AIR 900

This course is designed to cover the basic theory and application of air conditioning system design. It is offered for persons who have an interest in the heating and cooling of buildings and wish to acquire a working knowledge of the modern methods used for the design of air conditioning systems for residential and small commercial buildings.
Prerequisite — Applicant should have a reasonable knowledge of mathematics and English at the Grade X level.
Course Content — Body comfort, air cycles: refrigeration cycle; heat sources and characteristics; psychrometric terms, chart and basic psychometric processes; cooling and heating load calculations for residences by H. R. A. Manual — J and air conditioning load estimating by ASHRAE methods for small commercial buildings; air distribution, duct design (residential) by HRA Manuals and for commercial application by the Equal Friction Chart; selection and application of self-contained packaged air conditioning equipment; air conditioning controls; balancing air conditioning systems.
Monday — 7:00 to 10:00 p.m. 90 hrs. Campus CL.

AIR CONDITIONING DESIGN — AIR 901

The course is provided for people who are interested in advancing their knowledge of design work in this area and for those who are presently employed with consulting engineers, manufacturers and contractors in the air conditioning industry.
Prerequisite — AIR 900 or equivalent.
Course Content — The course will cover more advanced considerations of air cycle and heat sources. The use of the psychrometric chart for advanced processes in relation to commercial application. Load calculation: duct design by Low Velocity and Equal Friction Charts and methods of pipe sizing for both refrigeration and water lines. The design of a chilled water system to show the application of a cooling tower and chiller with the use of fan coil units. Selection of central station equipment and controls. All terms used in the calculations are based on the accepted practices of the A.S.H.R.A.E. in the design of central station systems.
Tuesday — 7:00 to 10:00 p.m. 90 hrs. Campus CL.

AIR CONDITIONING CONTROL — AIR 902

Prerequisite — AIR 901 or equivalent.
This course is designed to cover the basic theory and application of automatic controls as applied to heating, ventilating and air conditioning systems. It is of practical use to engineers, technologists and draftsmen employed with the consulting engineers, contractors and automatic control manufacturers.
Course Content — Introduction to automatic control, fundamentals of measurement: electric, electronic and pneumatic control circuits and units. Selection of control valves and dampers, typical applications to radiation, central-fan heating, commercial refrigeration, fan-coil units, induction units and year-round air conditioning systems.
Wednesday — 7:00 to 10:00 p.m. 90 hrs. Campus CL.

AIR CONDITIONING DESIGN — AIR 904

The course is designed to cover the more complex problems involved in the design of air conditioning systems for high-rise buildings. It is provided for persons connected with the design, sales, installation and operation of such systems.
Prerequisite — Applicants should have completed Air Conditioning Design — AIR 900 and AIR 901, or have equivalent knowledge or practical experience.
Course Content — Centrifugal water chilling cycle, machines and the use of economizers and capacity controls; absorption water chilling cycle, machines and controls; multi-storey, multi-office systems; high pressure duct design; typical piping arrangement to induction coils; types of control systems used in induction systems; cooling tower selection and application; water treatment; vibration and its control; sound attenuation.
Thursday — 7:00 to 10:00 p.m. 90 hrs. Campus CL.

GAS FITTER (Pre-Licence) — HT 140

This course is designed for persons presently engaged in the heating or appliance field, who wish to obtain the necessary knowledge to write the Department of Energy & Resources management gas fitters examination.
Course Content — Properties of natural gas, fundamentals of combustion, gas piping, venting, appliance requirements, fundamentals of gas controls, conversion burners, commercial and industrial utilization, service problems ,shop work.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.

WARM AIR HEATING AND AIR CONDITIONING (Domestic) — HT 900

This course is provided for persons who have a general knowledge of house construction and the problems relation to domestic heating; persons who may be connected with the heating industry who wish to acquire a working knowledge of the basic and more advanced techniques involved in the design and application of warm air heating and air conditioning systems and equipment.
Prerequisite — Grade X or equivalent.
Course Content — Heat loss and heat gain calculations by N.W.A. Methods — Components, equipment and controls for heating and cooling, system specifications, zoning and duct sizing by N.W.A. manuals — 'A' and 'No. 9, use of the Equal Friction Charts. Uses of the Psychrometric Chart. Humidification and dehumidification, the heat pump, air cleaning, system balancing.
Monday — 7:00 to 10:00 p.m. 90 hrs. Campus CL.

OIL BURNER, Part I — HT 130

This course consists of approximately 40% theory and 60% shop and is designed to prepare students to write examinations for Oil Burner Servicing Licence Class III.
Prerequisite — Grade X or working with associated trades.
Course Content — Types of domestic burners, parts of burners, filters, purpose of controls, settings for basic controls, fuel line problems, safety precautions, public relations, procedure for annual conditioning.
Tuesday — 7:00 to 10:00 p.m. 30 hrs. Campus CL.

OIL BURNER, Part II — HT 131

This course consists of approximately 50% theory and 50% shop. It is designed to prepare students to write the examination for Oil Burner Servicing License Class II.
Prerequisite — HT130 or satisfactory experience.
Course Content — Theory of combustion, types of burners, fuel units, transformers, combustion chambers, nozzles, tank installations, controls, heating systems, wiring diagrams, service procedures, regulations, public relations.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.

COMMERCIAL AND INDUSTRIAL OIL BURNERS — HT 901

This course is designed to prepare students to write the examination for Oil Burner License Class 1.
Prerequisite — Oil Burner Class II License.
Course Content — Properties of commercial fuel oils, types of burners, preheaters, burner selections, flue gas analysis, combustion control, non-programming, sequence, programming schematic piping and wiring diagrams of combustion systems, tank installations, service analysis and regulations.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.

GAS APPLIANCES — AP 900

Prerequisite — Grade X or equivalent.
Course Content — Gas ranges, classification and types, gas range adjustment and servicing, tip burner adjustments, simmer adjustments, low temperature oven burner adjustments. oven heat control, broiler adjustments, burner valves, range pilots, by-pass flame adjustments, automatic gas range ovens, Electrical, schematic wiring diagrams, circuit testing and fault finding, gas dryers, classification and types, gas dryer operation, dryer controls, thermostat, timer, door switch, solenoid valve, warp safety switch, dryer installation, gas connection, exhaust system, electrical systems, schematic wiring diagrams, circuit testing and fault finding, miscellaneous appliances, gas refrigerators, gas fired incinerators, gas lamps, LP conversion.
Monday and Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.
Commencing February, 1972

COMMERCIAL AND INDUSTRIAL GAS — AP 901

Prerequisite — Applicants should have a Gas Fitters License and be employed in the industry.
Course Content — Fundamentals of combustion control, flame detection devices, firing systems, firing sequences and programs, logic diagrams, combustion controls, non-programming and programming, gas fired conversion burners and boilers, boiler classification and terminology, input calculations, burner installations, flue gas analysis and boiler efficiency, types of conversion burners and package boilers, required CGA valve train assemblies, schematic wiring diagrams, commercial hot water heaters, type, hot water heaters selection (calculations), mixing valves and accessories, gas controls, commercial hot water systems,

miscellaneous equipment, multiple hot water heating units, infra red burners, make-up air heaters and gas fired air conditioning.
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.

PROPANE GAS — AP 902

This course is designed to prepare the student to write the examination for the Propane Gas Fitters License.
Prerequisite — Gas fitters licence for natural gas.
Course Content — Properties of propane gas, basic requirements for field approved appliances, propane piping and tubing requirements, review of ventilation and combustion air, general requirements for appliances. Storage and handling cylinder filling, location and storage, propane tanks, accessories and equipment. Transports and tank trucks and the transportation of propane. Propane as an engine fuel, vapourizers, indirect and direct fired, cylinder systems for highway mobile vehicles. Review of basic domestic gas burner controls and heating system. Review of the domestic hot water heater.
Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.

APPLIANCE SERVICING, Part I (Electrical Fundamentals and Small Appliances) — AP 903

Prerequisite — Grade X or satisfactory equivalent.
Course Content — Nature of electricity, basic electrical quantities, Ohm's Law and its application, electrical circuits, magnetism and electromagnetism, electrical circuitry and fault finding, motors, power and heating effects, electrical measuring instruments, various switching devices, theory and repair of small appliances. Ranges.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.

APPLIANCE SERVICING, Part II (Domestic Refrigeration) — AP 904

Prerequisite — Grade 10 or equivalent.
Course Content — Fundamentals, compression system of refrigeration, refrigerants, liquid feed devices, evaporators, compressors, condensers, electric motor controls, defrosting methods, food preservation, evaluating and charging, leak testing, dismantling and assembling procedures for refrigerators and air conditioners, circuit tracing, fault finding, service analysis.
Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.

APPLIANCE SERVICING, Part III (Laundry Equipment) — AP 905

Prerequisite — Satisfactory completion of AP 903 or equivalent.
Course Content — Theory and operation of wringer and automatic washers, dryers, and dishwashers; fault finding and repair procedures, circuit tracing, service analysis.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.

INDUSTRIAL PROCESS CONTROLS — AP 906

Prerequisite — Gas fitter's licence or propane licence.
Course Content — Combustion flame safeguard controls — selection and application of heating and process. Theory and application of the sensing devices of the various controls.
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.

ARCHITECTURAL DRAFTING, Part I — DR 900 (Drafting)

Course Content — Drafting equipment and procedure, Canadian symbols and conventions, foundation and floor plans for various types of construction, site plans, typical wall section, window details, door details, lathing and plastering details, stair details, fireplace and chimney details, simple structural steel and reinforced concrete details, freehand sketches.
Textbooks — Architectural Drawing and Light Construction by Muller, publisher McGraw-Hill Publishing Co. Architectural Drawing Standards, No. 33GP7, by National Research Council, publisher Queen's Printer, Ottawa.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

ARCHITECTURAL DRAFTING, Part II — DR 901

This course will be a continuance of the first year with elaboration of topics of the first year and additions of new materials and methods to allow progresson to the drawing of a complete set of working drawings for a small industrial building. The emphasis of this course is NOT on aesthetic or structural design but primarily on skill development required to produce a set of working drawings to the highest standard of delineation.
Prerequisite — Successful completion of the first year course, persons presently employed in the field of architectural drafting at the junior level or graduates of Grade 12 Architectural Drafting.
Course Content — Planning drawing layout — presentation drawing in the form of rendered plan and elevation — drawing the plan or plans, elevations, full sections, details and structural drawings.
Text — Architectural Drafting and Light Construction by Muller, publisher McGraw-Hill.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

COMPUTER PROGRAMMING FOR ENGINEERING TECHNICIANS — DR 904

An introductory computer course of interest to survey and engineering technicians.
Course Content — Students will learn simple programming on the college time-sharing system with applications made to their own field of interest.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

BLUEPRINT READING FOR THE CONSTRUCTION TRADES — DR 10/20/131

This course is intended for those working in all branches of the building trades and serves as a foundation for further study. It is also of much practical value to people engaged in many fields of business and industry who work in conjunction with the building trades. The content of the course includes the basic principles of drawings and a detailed study of blueprints.
Course Content — orthographic projection, dimensions, pictorial drawing, drawing to scale, symbols and conventions, standard constructions, plan study, construction details, plan reading and interpretation.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

ENGINEERING SURVEYING (Surveying and Levelling) — CO 104/SURV 110

Course Content — Fundamental principles of surveying, levelling, chaining, use of the transit, bearings and azimuths, field notes, transit surveying, latitudes and departures, calculation of missing courses, calculation of areas D.M.D's earthwork computations, introduction to curves.
Textbook — Simplified Site Engineering by Parker, Gay and MacGuire, publisher John Wiley & Sons Inc.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

PLANE SURVEYING — SURV 101 — A.T.E.C. COURSE (Approved)

Prerequisite — MATH 100
Course Content — Importance of surveying, correction for measured distances, use of simple distance measuring equipment. Measurement of angles — with transit; differential trigonometric, profile and crossection levelling; type, adjustments and use of levels — problems. Methods of stadia — problems, topographical surveys contour lines, direction of line, magnetic Meridian and declination, isogonic chart, azimuth and bearing of a line, traverse surveys and computations, closing a traverse by latitudes and departures, traverse computations of topographic map — construction surveys, municipal surveys, grades, methods of setting grades — horizontal circular curves, theory, computations, field practise — demonstration of modern survey equipment.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

ADVANCED PLANE SURVEYING — SURV 201

Prerequisite — SURV 101 or equivalent.
Course Content — Simple curves, vertical curves, curve intersections, transition curves, stadia surveying, route surveys, area surveys, optics, adjustments of instruments, photogrammetry, observation for meridian.
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

PRACTICAL ASTRONOMY — SURV 203

This is a general course in the practical applications of astronomy and is designed in the interest of individuals in the navigation, aviation and survey fields.
Course Content — Polaris observation for meridian, calculation procedure, determination by astronomic observation of longitude, time, latitude; determination of the azimuth of a line; sun observation, corrections, use of tables, procedures; sufficient spherical trigonometry for the solution of all above.
Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

LEGAL SURVEYING — SURV 204

This course is of interest to land speculators, developers, property agents, real estate salesmen and survey personnel, and is designed to acquaint the individual with the various methods of land registration in Ontario.
Course Content — Registry office, land titles office, history and development. Types of documents and plans; government acts, expropriation procedures, plans; methods of registering, legal transfer and general procedures; deeds; description of township offices.
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

STRUCTURAL DESIGN — BASIC — STR 900

This course is of interest to the person who wishes a general information course rather than a detailed study of the latest structural design methods. It will contain basic principles pertaining to: Reinforced concrete design with emphasis on the ultimate strength design; foundations and retaining walls, an analysis on types of foundations and retaining walls; structural steel design relating to structural members and frames of structural steel components including the detail parts, welds, bolts, etc. required for fabrication and erection.
Reference texts: (1) N.R.C. Building Code, 5th edition, (2) A.C.I. Manual of Concrete Practice, (3) C.I.S.C. Manual of Steel Construction.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

REINFORCED CONCRETE DESIGN — STR 218
Course Content — Principles of mechanics, forces, stresses, moments of reactions, shear and bending moments, theory of bending and properties of sections. Concrete — manufacture of cement, properties and use of aggregates and additives and placement of concrete. Reinforcing — reinforcing bars, bending and bending schedules and reinforcing bar placement. Reinforced concrete design — stresses in reinforced concrete. Modulus of elasticity design formulas for beams, diagonal tension and web reinforcement, bond, design of rectangular reinforced concrete beams, alternate design, web reinforcement for girders, design of T-beams, one-way solid slabs, load tables, design of ribbed slabs, design of stair slabs, design of independent footings. National Building Code — interpretation, application. Reference text — Simplified Design of Reinforced Concrete by Parker, Gay and MacGuire, publisher John Wiley & Sons Inc.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

STRUCTURAL STEEL DESIGN AND DETAILING, Part I — STR 122
Course Content — Force systems, force analysis of structures, stress and strain, shear and moment in beams, design of simply supported beams — structural steel, plain material, fabrication, bolted and welded connections.
Textbooks — Structural Steel Detailing/AISC Mechanics of Materials by I. J. Levinson, publisher Prentice-Hall.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

CONSTRUCTION METHODS AND MATERIALS (Building Construction) — CO 901
Course Content — Brick material, masonry, bricks, tiles, etc., doors and windows, light wood framing, foundations, excavation and waterproofing.
Textbooks — Materials and Methods of Architectural Construction by Parker, Gay and MacGuire, publisher John Wiley & Sons Inc. Principles and Practice of Light Construction by R. C. Smith.
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

CONSTRUCTION MATERIALS — CIV 100
Prerequisite — Soil mechanics and foundations.
Course Content — Specifications and contracts related to construction, aggregates, cement, elements of quality concrete, ACT method of concrete mix design, special concretes and concrete admixtures. Manufacture and effective utilization of concrete, field problems, soil cement stabilization, introduction to asphalts, bituminous pavements, asphalt mixtures, aggregates for asphalt concrete, asphalt concrete mix design; production, construtcion, field control of asphalt.
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

QUANTITY SURVEYING (Part I) AND BUILDING CONSTRUCTION ESTIMATING — CO 101
Tbis course is offered to small builders and those wishing to commence studies for Canadian Institute of Quantity Surveyors examinations. Successful completion of the course is recognized by C.I.Q.S. as an exemption from their examination Quantities I.
Course Content —Mathematics related to take off, general methods and procedures of taking off quantities for excavation; site work, concrete, formwork, reinforcement, brick and block masonry, and rough carpentry.
Textbook — Method of Measurement of Construction Works (current edition), published by Canadian Institute of Quantity Surveyors.
Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

MUNICIPAL BUILDING OFFICIALS COURSE — BUILDING INSPECTORS — CO 902
This course is designed to train municipal building officials in the areas covering their role as building inspectors based on the National Building Code.
Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

JOB PLANNING AND CONTROL FOR THE BUILDER — CO 904
This is essentially a practical course for the builder and superintendent in the use of systems to enable him to economically and efficiently carry out a construction contract.
Course Content — Scheduling methods and control including Bar Charts, Cascade Charts, Critical Path Method, PERT and line of Balance Method. An introduction to the use of computers in these methods will be given.
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

BLUEPRINT READING FOR MECHANICAL/ELECTRICAL CONSTRUCTION TRADES — CO 905
Prerequisite — Persons employed in the construction industry and for those studying in courses covering the various aspects of the industry.
Course Content — Plan reading and interpretation of architectural drawings, heating and ventilation drawings, plumbing and drainage drawings and electrical drawings in respect to symbols, conventions, systems and general methods of installation.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

BUSINESS AND COMMERCE

ACCOUNTING I — ACC 100
Fundamental principles of accounting. The entire bookkeeping cycle, including journals, posting, preparation of trail balance, adjusting and closing entries and preparation of a post-closing trial balance; controlling accounts and specialized journals are introduced; a detailed study is made of accounts receivable, inventory valuation, fixed assets and depreciation, and natural resources and depletion.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

BOOKKEEPING — ACC 900
Note: Credit subject for Canadian Institute of Quantity Surveyors
Course Content — Starting a bookkeeping system, recording transactions affecting balance sheet amounts, recording transactions affecting income and expense amounts, the income statement and the balance sheet, journalizing, posting and taking a trial balance, the six-column work sheet, closing entries and post-closing trial balance, special journals and subsidizing ledgers, bank reconciliations, the eight-column work sheet with adjusting and closing entries, financial reports.
Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

BASIC PRINCIPLES OF ADVERTISING, SALES AND MERCHANDISING — BC 900
Prerequisites — Persons involved in or hoping to become involved in this intriguing field should have Grade 12 or Business equivalent.
Course Content — Can be divided into three parts for detailing topics to be covered as follows:
1. Advertising — analyzing product appeals, newspapers, magazines, radio, TV, transit cards, outdoor posters, direct mail; point-of-purchase displays; copy preparation, mail order; liason with merchandising.
2. Selling — Personnel development: the nature of selling process, factors in the selling process, the customer, product knowledge, the approach, the presentation, the close, the creative factor in all aspects of retail selling.
3. Marketing — As a process, nature of consumption, customer motivation, the overall marketing picture, the retailing structure planning and standardization of products, factors in buying, selection of channels of distribution, price determination and factors in setting prices, sales by marketing function.
Thursday — 7:00 to 10:00 p.m. 90 hrs. Campus T.

ADVERTISING — BC 901
An orientation course looking at advertising from the marketing, communications and consumer viewpoints. Stress will be placed on:
(1) What advertising is, the position of advertising in our society, the psychology behind advertising.
(2) Advertising as it exists in the framework of both marketing and communications.
(3) A comprehensive study of the various types of media.
(4) Advertising planning and management.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

SALESMANSHIP — BC 903
Covers the theory and practice of effective selling both in the retail and industrial fields. This course is designed to familiarize the student with the factors necessary for the development of basic persuasive abilities which are necessary in selling, as well as in other fields.
Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

BUSINESS MACHINES (Accounting Machines) — BM 900
The purpose is to introduce students to machine accounting procedures and to develop an operating speed which will be acceptable to industry.
Prerequisite — Grade 10 and a typewriting speed of at least 35 words per minute.
Course Content — Instruction and practice in machine operation through the use of pre-recorded tapes and practical exercises. Accounts receivable, Accounts payable, Journal distribution and payroll are taught using the following accounting machines:
National Cash Model 3300
Burroughs Sensimatic Models F 1100, F 6100
Olivetti-Underwood Model 1502
Monroe-President Model 1458
Smith Corona Marchant Model 602
Monday and Wednesday — 7:00 to 10:00 p.m. 120 hrs. Campus T.

BUSINESS MACHINES — BM 904 (Printing and Rotary Calculator)
The aim is to develop competent calculator operators with an acceptable operating speed and the ability to solve mathematical business applications as related to calculators.
Prerequisite — Grade 10
Course Content — Instruction and practice to develop 10 key and full keyboard ease of operation, all phases of addition, subtraction, multiplication and division as related to practical business applications taught with the following equipment: Friden, Monroe, Olivetti-Underwood, Smith Corona, Marchant and Victor.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

DICTAPHONE — BM 905
The purpose is to prepare the student to become an accredited Dictaphone secretary, with an initial capacity of 60 fifteen-line letters a day.
Prerequisite — A thorough knowledge of Business English, spelling and letter setup

(minimum of Grade XI) plus a typing speed of 45 words per minute.
Course Content — Typing from dictabelt records put out by the Dictaphone Corporation.
Monday and Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

BUSINESS MANAGEMENT I — BUS 900

Course Content — The organization structure and its relation to the Behavioral Sciences and Communications. The decision-making process and decision theory, under risk and uncertainty.
Course will follow a combination of lectures, group discussions, and case studies.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

BUSINESS MANAGEMENT II — BUS 901

Prerequisite — BUS 900.
Course Content — Planning Analysis and Control as related to Marketing, Finance, and Organization Theory. Advanced case studies, group discussions, and guest speakers, will be used for advanced decision making.
Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

BASIC COMPUTER CONCEPTS I — EDP 100

The purpose is to provide an overview of business data processing which will prepare the student for further study in the areas of programming and system planning.
Course Content — Survey of the history of automatic data processing; Punched card data processing: Modern business computers: central processing unit, levels of programming languages, software, particularly compilers, various I/O media and devices, batch processing VS online processing, applications; Problem solving: algorithms, flowcharts, programming in BASIC using time-sharing terminals: Visits to computer installations.
Monday and Wednesday — 7:00 to 10:00 p.m. 90 hrs. Campus T.

BASIC COMPUTER CONCEPTS II — EDP 101

The purpose of this course is to develop expertise in the use of problem solving techniques and an awareness of the documentation standards required in a typical data processing department.
Prerequisite — Completion of EDP 100 and a satisfactory score on a programming aptitude test.
Course Content — Exercises in flowcharting and coding in BASIC, testing and debugging programmes. Introduction to COBOL: Case problems involving typical accounting applications; Use of standard forms for presenting problems to the student, and standard format to be followed by student in his documentation; Operation of computer in testing programmes.
Tuesday and Thursday — 7:00 to 10:00 p.m. 90 hrs. Campus T.

MARKETING — MARK 100

To prepare the student for effective communication in marketing activities.
Course Content — Detailed studies of the Product and its Promotion, the Market and its Potential, the Price, and Sales Distribution.
This course also offers student involvement in case studies of the management role of modern marketing techniques.
Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

OFFICE PRACTICE A — OP 149A

The purpose is to familiarize the student with the requirements, the characteristics, and the organization of business offices and the duties most frequently performed. Lecture time is to be kept to a minimum and practical assignments are emphasized.
Prerequisite — 35 words per minute. (Typing)
Course Content — Business organization — classification of business and types of ownership; purchasing, sales and accounting routines; the stenographic, administrative and receptionist duties of a secretary; sources of information; reports; manuscript typing and proofreading.
Familiarization with the services — postal, telephone, telegraph, cable and wireless, and banking — used by employers. More advanced typing theory with emphasis on typing from corrected copy/manuscript work, typing of balance sheets and financial statements with insertions made in red, and memoranda.
Monday and Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

OFFICE PRACTICE B (Stenographic) — OP 149B

The purpose is to give the student a thorough familiarization with filing techniques and other duties performed by secretaries. Lecture time is to be kept to a minimum and practical assignments are emphasized.
Prerequisite — 35 words per minute. (Typing)
Course Content — Different types of filing systems and procedures involved in filing — preparatory filing steps, cross-referencing, etc. The emphasis in the filing instruction is on completing practical, office-type assignments. Familiarization with different office machines — reproduction processes and machines; dictating and transcribing machines. Emphasis is also on the personal work the student, as a secretary, might be called upon to perform for her employer and includes such items as travel arrangement — typing itineraries, secretarial duties, expense reports; preparing legal documents — affidavits, endorsements, wills, etc.;

arranging meetings — agendas, memos, minutes; and a general review of office standards, grooming and deportment.
Prerequisite — Office Practice I or equivalent.
Tuesday and Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

PITMAN SHORTHAND — THEORY — SH 100

The purpose is to provide a basis for the development of speed in writing shorthand.
Prerequisite — Grade 12 English or equivalent.
Course Content — The basic fundamentals of the theory of Pitman shorthand, common short forms, and phrases. Particular emphasis is placed on the development of a high frequency vocabulary common to all dictation.
Dictation is introduced in the first lesson. By the end of the course the average student is able to write material of a limited vocabularly at speeds of up to 60 w.p.m.
Monday and Wednesday — 7:00 to 10:00 p.m. 150 hrs. Campus T.

PITMAN SHORTHAND — ELEMENTARY SPEED LEVEL — SH 101

This course is offered to those persons desiring to develop facility in writing shorthand at speeds up to 100 words per minute.
Prerequisite — SH 100 or SH 900 or equivalent, plus Grade 12 English or equivalent, and 45 words per minute in typewriting.
Course Content — Development of facility in writing and reading shorthand notes with particular emphasis on the 1,500 common-word vocabulary. Practice in transcribing notes at the typewriter.
Monday and Wednesday — 6:00 to 9:00 p.m. 90 hrs. Campus T.

PITMAN SHORTHAND — INTERMEDIATE SPEED LEVEL — SHP 149C

The purpose is to develop the facility of writing shorthand of average commercial difficulty at speeds up to 120 words per minute, and transcribing from notes at the typewriter.
Prerequisite — SH 101 or equivalent, and 50 words per minute in typewriting, plus Grade 12 English or equivalent.
Course Content — Development of skill in writing and reading shorthand notes, with emphasis on short forms and phrases. Practice in transcribing notes at the typewriter in acceptable, mailable form.
Monday and Wednesday — 6:00 to 9:00 p.m. 90 hrs. Campus T.

REFRESHER COURSE — THEORY OF PITMAN SHORTHAND — SH 900

This course is specially designed for those who have had Pitman Shorthand in the past, but require a quick review before going on to writing at increased speed.
Prerequisite — Grade 12 English or equivalent — a reasonable knowledge of the theory.
Course Content — Quick review of the principles of Pitman shorthand. Emphasis on facility in the use of short forms, contractions, intersections, and phrases.
Tuesday and Thursday — 6:00 to 9:00 p.m. 90 hrs. Campus T.

PITMAN SCRIPT — SH 902

Pitman Script is a completely new system of fast writing which has been developed by a team of specialists. It is based on the twenty-six letters of the English alphabet and it uses only a few special signs for the most frequently occurring letters and words. This system is designed for those who want to write faster than is possible in ordinary longhand but who do not want to take the time or to make the necessary effort to learn a complete shorthand system — basic theory is mastered in only 30 hours.
Prerequisite — Grade 12 English or equivalent and at least 35 words per minute in typewriting.
Course Content — A presentation of the principles of the system together with dictation which is introduced from the first lesson.
Tuesday and Thursday — 6:00 to 9:00 p.m. 90 hrs. Campus T.

SHORTHAND — ADVANCED SPEED LEVEL — SH 901

This course is aimed at qualifying shorthand writers of all systems (Pitman, Machine and Gregg) for verbatim reporting positions. The following is a partial list of files open to verbatim reporters: Magistrates' Courts; County Division and Surrogate Courts; Supreme Court of Ontario; Exchequer Court of Canada; Admiralty Court; Juvenile and Family Courts; Special Examiners' Offices; House of Commons (Hansard); etc.
Prerequisite — The ability to write 120 words per minute.
Course Content — Dictation of business letters, legal and literary matters, jury charges, court testimony, etc. Emphasis is placed on the basic techniques required to attain high speeds in shorthand. High speed phrasing and short cuts are also covered.
Saturday — 9:30 to 12:30 p.m. 60 hrs. Campus T.

LEGAL STENOGRAPHIC — SH 102

This course is offered to those with a good basic knowledge of shorthand, who wish to become legal stenographers. Prerequisite — SH 101, SHM 149B or equivalent, plus Grade 12 English or equivalent, and 45 w.p.m. in typewriting.
Course Content — Legal terms, dictation and transcription of legal letters. Legal forms and documents.
Monday — 6:00 to 9:00 p.m. 90 hrs. Campus T.

FORKNER SHORTHAND

Forkner shorthand is designed for speeds up to 120 w.p.m. It is a system which employs a combination of longhand characters and shorthand symbols. It has been developed on the premise that it is a waste of time and a burden on the memory to learn shorthand characters for sounds that can be rapidly and easily expressed by longhand characters which the learner can already make at high speeds Where longhand characters are complicated or require a number of strokes to write, a symbol has been substituted.

FORKNER SHORTHAND — THEORY — SHF 149A

The purpose of this level is to provide a basis for the development of speed in writing shorthand.
Prerequisite — Grade 12 English or equivalent and at least 35 words per minute in typewriting.
Course Content — A presentation of the principles of the system, together with extensive dictation which begins as early as Lesson 5.
Tuesday and Thursday — 7:00 to 10:00 p.m. 90 hrs. Campus T.

FORKNER SHORTHAND — SPEED — SHF 149B

This course is offered to those persons desiring to develop facility in writing Forkner Shorthand at speeds up to 100 words per minute.
Prerequisite — Completion of Theory Level or equivalent, plus Grade 12 English or equivalent, and 45 words per minute in typewriting.
Course Content — Development of facility in writing and reading shorthand notes within the 3,000 word high-frequency range which makes up 97% of all ordinary dictation material. Practice in transcribing notes at the typewriter.
Monday and Wednesday — 7:00 to 10:00 p.m. 90 hrs. Campus T.

MACHINE SHORTHAND

Machine shorthand or touch shorthand is a very modern and efficient system widely used in the United States and other countries. It is not new but is a well-established system in use for over fifty years. It is written on the stenograph machine, a small, rugged, silent, non-electric machine which prints at highspeed the familiar letters of the alphabet. With further practice following the Secretarial Course in Machine Shorthand the attainment of high speeds is possible thus opening up the highly paid fields of court reporting, reporting of commissions, conventions, meetings, arbitration hearings and so on.

MACHINE SHORTHAND — THEORY — SHM 149A

The purpose is to provide a basis for the development of speed in shorthand.
Prerequisite — Grade 12 English or equivalent.
Course Content — The basic fundamentals of the theory of Machine Shorthand, common short-forms and phrases.
Dictation is introduced from the first lesson. By the end of the course considerable facility is acquired in note taking from material of limited vocabulary.
Monday and Wednesday — 6:00 to 9:00 p.m. 150 hrs. Campus T.

MACHINE SHORTHAND — ELEMENTARY SPEED LEVEL — SHM 149B

This course is offered to those persons desiring to develop facility in writing machine shorthand at speeds up to 100 words per minute.
Prerequisite — SHM 149A or equivalent, plus Grade 12 English or equivalent, and 45 words per minute in typewriting.
Course Content — Development of facility in writing and reading Shorthand notes using simple commercial vocabulary. Practice in transcribing notes at the typewriter in acceptable mailable form.
Tuesday and Thursday — 6:00 to 9:00 p.m. 90 hrs. Campus T.

MACHINE SHORTHAND — INTERMEDIATE SPEED LEVEL — SHM 149C

The purpose is to develop the facility of writing shorthand of average commercial difficulty at speeds up to 120 words per minute and transcribing notes at the typewriter in acceptable, mailable form.
Prerequisite — SHM 149B or equivalent, plus Grade 12 English or equivalent, and 50 words per minute in typewriting.
Course Content — Development of facility in writing and reading shorthand notes. Practice in transcribing notes at the typewriter in acceptable, mailable form.
Monday and Wednesday — 6:00 to 9:00 p.m. 90 hrs. Campus T.

TYPEWRITING A — TYP 152A (Beginning Typewriting)

The purpose is to: (a) achieve a thorough mastery of the keyboard using the touch system, plus an introduction to basic typewriting setups. (b) achieve 25 words per minute on 5-minute tests.
Prerequisite — Basic knowledge of English.
Course Content — All the keys will be taught with special emphasis on the touch system (posture, good stroking, rhythm and correct fingering are an integral part.) The names, care, and proper manipulation of the parts of the machine will be introduced as required.

The rules of syllabication and capitalization, an introduction to basic centering, tabulation and letters, plus typing of value for personal use. The speed objective is 25 words per minute on 5-minute tests.
Monday and Wednesday — 7:00 to 10:00 p.m. 90 hrs. Campus T.

TYPEWRITING B — TYP 152B (Advanced Typewriting)

The purpose is to: (a) further develop typewriting skills and to concentrate on more advanced typewriting setups. (b) achieve 40 words per minute on 10-minute tests.
Prerequisite — 25 words per minute or TYP 152A.
Course Content — During this course, emphasis will be placed on practical typing of tabulation — tables, financial statements, centering — menus, programs, announcements, business letters — different styles, placement, carbon copies and envelopes, essential business forms, erasures and corrections, squeezing and spreading, duplicating — the typing of dittos, stencils and offset masters.
In addition, skill development to bring the typist up to 40 words per minute or better on 10-minute tests.
Tuesday and Thursday — 7:00 to 10:00 p.m. 90 hrs. Canipus T.

BASIC TYPEWRITING — TYP 900

An intensive course in keyboard typewriting using the Lumisonic System. This course is designed to develop quickly a high keyboard typing speed.
Course Content — The first six hours will be spent learning the keyboard with emphasis on posture, good stroking, rhythm and correct fingering. Later lessons will develop speed and accuracy to a high order using modern, programmed, instructional techniques.
1 hour per night — 5 nights a week — 10 weeks. Campus T.

PERSONNEL ADMINISTRATION — BUS 902

The advent of technological change is changing our social and work environments. The effects of this change on personnel relations requires more extensive study and consideration by employers.
Course Content — The development of personnel departments to meet employee needs; the indicated shift in these needs; technological change and its effect on unions; group relations; work conditions; staff relations; upward mobile, indifferent and ambivalent attitudes.
Case studies, discussions, and intensive readings will be used to discuss these topics.
Prerequisite — Grade XII and some related business experience.
Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

PURCHASING — BC 906

Many smaller Canadian companies are approaching the volume of business which requires the benefit of a trained purchasing agent.
Course Content — The responsibilities of the purchasing agent in relation to the organization. The study of value analysis. Quantity purchases in relation to inventory control and traffic.
Thursday — 7:00 to 10:00 p.m. 60 hrs. 20 weeks.

IMPROVING ADVERTISING EFFICIENCY — BC 905

An advertising management course designed to help businessmen improve the efficiency of their advertising dollars. Stress will be placed on:
(1) The role of advertising in the marketing mix
(2) Establishing specific advertising objectives
(3) Budgeting, planning and management
(4) Measuring advertising effectiveness
(5) Consumerism, ethics and law.
Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

MEDICAL TERMINOLOGY — ANAT 100

The purpose is to train those interested in the field of medical dictatyping or medical stenographic.
Prerequisite — none.
Course Content — Emphasis will be placed on terminology related to the structure and function of the various body systems with some pathology. Reference will be made to nomenclature and therapeutic action of common drugs. There will be some laboratory work.
Tuesday — 7:00 to 9:00 p.m. 2 consecutive 15 week sessions. Campus T.

ELECTRICAL/ELECTRONIC TECHNOLOGY

ELECTRICAL CONSTRUCTION & MAINTENANCE (C/M) Part I — EL 10

Prerequisite — Grade 10 or equivalent.
Course Content — Ohm's Law, series circuits, combination circuits, two-wire distribution, line loss, power efficiency, wire calculations, batteries, magnetism, electro-magnetism, induction, three-wire distribution, Ontario Hydro Electrical Safety Code Regulations, shop projects.
Monday and Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

ELECTRICAL CONSTRUCTION & MAINTENANCE (C/M) Part II — EL 20

Prerequisite — EL 10 or the equivalent.
Course Content — electro-magnetism, induction, DC generators, generator set-up and operation, DC motor, motor operation and controls, Ontario Hydro Electrical Safety Code Regulations, shop projects.
Tuesday and Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

ELECTRICAL CONSTRUCTION & MAINTENANCE (C/M) Part III — EL 30

Prerequisite — EL 20 or the equivalent.
Course Content — A.C. Fundamentals, vectors, single phase transformers, three-phase motors, three-phase transformers, auto transformers, Ontario Hydro Electrical Safety Code Regulations, shop projects.
Tuesday and Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

ELECTRICAL APPRENTICE REVIEW — EL 900 (C/M)

This is a special course for those apprentices who are in their final term and who expect to write the qualifying examination sometime within the year.
The course will endeavour to cover theory, code and equipment over the entire area of apprenticeship training.
Monday and Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

ESTIMATING FOR THE ELECTRICAL TRADE — EL 901

Prerequisite — Journeyman electrician or equivalent.
Course Content — plan analysis, take-off procedure, transferring and pricing, labour units, installation projects, adjustments for working conditions, cable pulls, pull boxes, labour cost variables, non productive labour, incidental and direct job cost, electric heating loads.
Monday and Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

ONTARIO HYDRO ELECTRICAL SAFETY CODE REGULATIONS — EL 902

Prerequisite — Applicants must be at least fourth year apprentices.
Course Content — authority, interpretations, use of the index, application of regulations.
Tuesday and Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

ELECTRICAL DRAFTING (Basic) — EL 903 — A.T.E.C. COURSE (Approved)

Course Content — Lettering, use of instruments, linework, orthographic projection, dimensioning, sections, architect scale, isometric projection, sketching.
Electrical and electronic symbols, basic electrical circuit diagrams, transformers, relays, riser and block diagrams, residential wiring, illumination and electric heating.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

LIGHTING FUNDAMENTALS — EL 904

Course Content — The course to begin with nature of light, the eye and relationship between light and sight, lighting terms, laws and controls as well as light measurement and meters. A discussion of light sources, its production and characteristics and including incandescent, gaseous discharge and fluorescent lamps. Luminaire data to consist of general, photometric, electrical and mechanical characteristics. Illumination design including zonal-cavity calculations for industrial buildings, offices and schools, store lighting, exterior and residential lighting. Cost analysis to include lamp economics, lighting system ownership and operating costs.
Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

ELECTRICAL FUNDAMENTALS — EL 905 — A.T.E.C. COURSE (Approved)

Prerequisite — Math 100
Basic electrical concepts; simple D.C. circuits; power; magnetism, electromagnetism; magnetic circuits; D.C. measuring instruments; A.C. measuring instruments; electrical measurements; induction; capacity; alternating current, resistance, impedance, power in A.C. circuits.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

ALTERNATING CURRENT CIRCUITS — EL 906 — A.T.E.C. COURSE (Approved)

Prerequisite — EL905 and Math 200.
Inductance; capacitance; alternating current fundamentals; R, L, and C in A.C. circuits; series A.C. circuits; parallel A.C. circuits; series resonance; parallel resonance; vector loci analysis; network theorems; coupled circuits and transformers; polyphase circuits; non-sinusoidal waves.
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus T.
(Subject to student approval this course can be run on Saturday A.M.)

INDUSTRIAL ELECTRONIC CONTROLS Part I — EL 40A

Prerequisite — Applicants must be fourth year apprentices, journeymen electricians, or maintenance electricians.
Course Content — review of basic principles, through study of AC theory, vector analysis, introduction to electronics, types of electronic tubes, amplifiers, tube circuitry and applications, phanotrons, thyratrons, and shopwork.
Instruction will consist of 40% theory and 60% shopwork.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

INDUSTRIAL ELECTRONIC CONTROLS Part II — EL 40B

Prerequisite — EL 40A
Course Content — power supplies, principle of timers, welding timers, current control with gas tubes, thyratron contactors, ignitron contactors, phase shifting, welder heat control, resistance welders, sequence weld timers, synchronous weld timers, shopwork.
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

INDUSTRIAL ELECTRONIC CONTROLS Part III — EL 40C

Prerequisite — EL 40B.
Course Content — photoelectric relays, heat controls, light dimming controls, principles of speed and voltage regulators, speed regulators for small DC motors, voltage control for DC and AC generators, single phase and poly-phase power rectifiers, oscillators, inverters, induction heaters, dielectric heaters, high speed light relays, register control servomechanisms, shopwork.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

ELECTRONIC FUNDAMENTALS Part I — ELTC 900

Course Content — DC theory, electron theory, current flow, magnetism, electromagnetism, motor action, transformers, capacitors, AC theory, resonance, impedance, bandwidth, tubes, diodes, triodes, pentodes.
Lab — suitable series of laboratory experiments correlated to theory.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

ELECTRONIC FUNDAMENTALS Part II (Radio) — ELTC 901

Prerequisite — successful completion of ELTC 900
Course Content — Power supplies, audio frequency output stages, detection, intermediate frequency amplifiers, oscillators, converters, RF amplifiers, superheterodyne receivers.
Lab — Suitable series of lab experiments related to theory as well as construction and test measurements on superheterodyne receiver.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

ELECTRONIC FUNDAMENTALS Part III (Television) — ELTC 902

Prerequisite — successful completion of ELTC 901.
Course Content — Principles of TV transmission and reception, scanning, cathode ray tube, deflection circuits, multivibrator, blocking oscillator deflection coils and transformers, damper circuit, high voltage circuits, synchronization circuits.
Lab — suitable series of lab experiments related to theory.
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

ELECTRONIC FUNDAMENTALS Part IV (Television) — ELTC 903

Prerequisite — successful completion of ELTC 902.
Course Content — video amplifiers, picture intermediate frequency amplifiers, alignment of TV intermediate frequency amplifiers, A.G.C. circuits, sound intermediate frequency amplifiers, power supplies, tuners, dynamic test points in TV receivers, trouble shooting.
Lab — suitable series of lab experiments related to theory.
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

ELECTRONIC FUNDAMENTALS (Transistors) — ELTC 904
A.T.E.C. COURSE (Approved)

Prerequisite — thorough knowledge of electronic fundamentals and radio receiver circuitry.
Course Content — introduction to modern electron theory, semi-conductor physics, junction transistors, transistor characteristics, transistor amplifiers, transistor oscillators, transistor radio receivers, transistors in television, receivers, transistors in electronic circuits, transistor developments, servicing transistor circuits. Laboratory work will form part of the course.
Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

ELECTRONIC CIRCUITS — ELTC 905 — A.T.E.C. COURSES (Approved)

Prerequisite — ELTC 904.
Course Content — transformer and transformer-coupled amplifiers, resistance-capacitance coupled amplifiers, special amplifiers, push-pull and phase inversion, Class C amplifiers, feedback, feedback oscillators, negative-resistance oscillators, miscellaneous sine-wave oscillators, modulation, detection, audio elements.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

DIGITAL COMPUTER PRINCIPLES — ELTC 906

Prerequisite — ELTC 904 or equivalent and background knowledge of transistor theory.
Course Content — Computer number systems and codes, diode and transistor logic circuits, transistor switching circuits, register circuits, Boolean algebra, arithmetic units, memory systems, input and output devices, the central processing unit.
Laboratory — Logic circuits, transistor flip-flops, counters, shift registers, Boolean logic circuits, the Philco trainer.
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

COLOUR TELEVISION — ELTC 909

Prerequisite — sound knowledge of black and white television circuitry. There will be a short qualifying test at the time of registration.
Course Content — principles of the colour TV system, colour receiver circuits: RF and IF circuits, video, sync and voltage supply circuits, band pass amplifier colour sync and colour killer circuits, colour demodulation, matrix section, colour picture tube and associated circuits — servicing the colour receiver, set up procedure, aligning the colour receiver, trouble shooting. Current models of receivers will be discussed and demonstrated.
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

ADVANCED TELEVISION SERVICE TECHNIQUES — ELTC 911

Prerequisite — Since technicians who successfully complete this course will be accredited by the Electronic Industries Association, applicants must be engaged full time in television servicing. Accordingly there will be a short qualifying test at registration.
Course Content — This course deals with modern TV fault-finding techniques based on increased knowledge of circuit operation and proper use of test equipment.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus T.

VIDEO TAPE RECORDERS THEORY AND MAINTENANCE — ELTC 912A

Prerequisite — fundamental knowledge of Electronics.
Course Content — An introduction to the theory of video tape recording (VTR) principles, the magnetic recording process, tape magnetization, single track, multitrack, vertical and slanted tracks (helical scans), signal modulation and demodulation system, pre-emphasis and de-emphasis requirements, FM signal differentiation, low pass filter, white clipper, limiter, d-c restoration, servo-operation, basic editing and color signal recording principles.
Demonstration of specific recorders by company representatives of major one-half and one inch VTR manufacturers.
Tuesday and Thursday — 7:00 to 10:00 p.m. 60 hrs. (10 weeks) Campus T.

ADVANCED VIDEO TAPE RECORDERS THEORY AND MAINTENANCE — ELTC 912B

Prerequisite — Video Tape Recorders Theory and Maintenance or work experience with VTR's operation and maintenance.
Course Content — With emphasis on two inch quadruplex video tape recorders, parallels will be drawn to one-half and one inch VTR's in detailed discussions on set-up adjustment procedures as related to function and theory: the study of system differences through circuit block analysis, video and audio signal systems, pre-amplifiers and head switching, processing amplifiers "drop-out" compensation, time-base stability through servo units, tape guide. Ampex methods of color signal recovery, velocity compensation, electronic editing (Editec), tape editing program (TEP), time code signals.
Demonstrations on equipment are planned whenever feasible.
Tuesday — 7:00 to 10:00 p.m. 30 hrs. (10 weeks) Campus T.

CABLE TELEVISION PRACTICE (Basic) — ELTC 913

Prerequisite — Basic Cable Television Practice or recommendation of employer.
Course Content —

1. Introduction to television. Conversion of light to an electronic signal. Use of the sync. signal and derivation of composite waveform. Comparison of black and white and colour. Modulation of the RF carrier. Channel allocations. Propagation and antennas. Elements of the receiver and reproduction.
2. Introduction to cable distribution. The basics of antenna site location, system layout, amplifiers, splitters, tap-off devices, subscriber's drops.
3. Co-axial cable characteristics, attenuation, impedance, loop resistance, requirements for impedance matching.
4. Decibels, VSWR, and return loss, and reflections.
5. Amplifiers, general description, tube type, transistorized, wideband, single-channel, main line, distribution and line extender. Power feed arrangements for transistorized amplifiers.
6. Line construction techniques — clearances, safety procedures, cable handling, connector splices, etc.
7. Tap-offs, and subscriber's drop and apartment house wiring.
8. Installation of amplifier housings, amplifiers and passive devices.
9. Service calls and customer relations.
10. Introduction to fault-finding using field strength meter and test TV set.
11. Fault diagnosis — adjacent channel and co-channel interference, cross-modulation, ghosts and noise.
12. Transistorized equipment and cable powering — basic do's and don'ts.

Monday and Wednesday — 7:00 to 10:00 p.m. 60 hrs. (10 weeks) Campus T.

INTRODUCTORY ETV AND BROADCAST MAINTENANCE — ELTC 915

Prerequisite — Fundamental knowledge of Electronics.
Course Content — Theory and techniques as applicable to closed television circuit (CTVC) operations found in broadcast studios, educational television (ETV), community cable television (CCTV) centers, and related fields. VU-Meters, audio distribution system and amplifier testing, equalization, turn-tables (T.T.), magnetic recording and playback systems and equipment evaluation, audio consoles, intercommunication (I.C.) and public address (P.A.) requirements.
Video distribution system and amplifiers, monochrome and color signal (NTSC) evaluation, video monitors, synchronization methods, switchers and effects generators, studio and telecine cameras, camera tubes, 16 mm telecine film projectors, basic test equipment and system evaluation, measurement techniques.
A field trip to a major T.V. broadcast center will be scheduled toward the end of the course.
Wednesday — 7:00 to 10:00 p.m. 45 hrs. (15 weeks). Campus T.

PRINTED CIRCUIT DESIGN — ELTC 916

Design to manufacture, flow chart; Terms and definitions; Basic design considerations; Basic mounting requirements; Front to back identification; Front to back registrations; Conductor spacing; Terminal area spacing; Terminal areas, terminals and eyelets unsupported holes, plated through holes; Computing terminal area size; Standards and specifications; Hole size standardization; Hole spacing; Hole locations; Materials; Design considerations: advantages, disadvantages; Mounting considerations; Design checklist: general; Accurate double-sided board @ 1:1; Terminal identification for computers; Multilayer design objectives; Flexible printed wiring boards.
Tuesday and Thursday — 7:00 to 10:00 p.m. 60 hrs. (10 weeks). Campus T.

ELECTRONIC INSTRUMENTS — ELTC 917

Definitions Methods; Fundamental units; Derived units; D.C. indicators; A.C. indicators; Potentiometers; A.C. & D.C. bridges; High input — Z devices; R.F. measurements, Audio measurements; Transducers and sensors; Wave form generation; Oscilloscopes; Testers.
Monday and Wednesday — 7:00 to 10:00 p.m. 60 hrs. (10 weeks). Campus T.

C.C.T.V. AND CABLE T.V. ORIGINATION COURSE — ELTC 919

Television waveform, video monitors, waveform monitors, vectorscope; Camera tubes, I.O., vidicon, plumbicon, flying spot origination; Camera electronic systems, function of controls; Practical work on vidicon monochrome camera; Lenses and optical systems, telecine multiplexers, film gamma, slides; Audio I; Audio II; 1" V.T.R.; Switchers and special effects; Lighting and studio planning; Review and examination.
Wednesday — 7:00 to 10:00 p.m. 60 hrs. (20 weeks). Campus T.

ENGINEERING TECHNOLOGY

INSTRUMENTATION

The Instrumentation Department will offer a series of part-time courses to enable those employed in the instrumentation field to upgrade their knowledge. Part-time courses may be used as credits towards the certificate which is obtained through full-time study. To enable students to plan their studies, the following courses will be offered during the 1970/71 and 1971/72 sessions.

		1970/71	1971/72
INST 100	Measuring Principles I	*	—
INST 130/131	Instrumentation	*	*
INST 203	Computer Control Principles I	*	—
INST 300	Automatic Control Principles II	*	—
INST 900	Basic Instrumentation Electronics	*	*
INST 101	Electronic Instrumentation	—	*
INST 104	Telemetering	—	*
INST 200	Automatic Control Principles I	—	*
INST 201	Final Control Elements	—	*
INST 301	Computer Control Principles II	—	*
INST 901	Instrumentation Test Procedures	—	*
INST 903	Instrumentation for Supervisor		

MEASURING PRINCIPLES I — INST 100 — A.T.E.C. COURSE (Approved)

Course Content — C.G.S., M.K.S., F.P.S., systems of units, dimensional analysis; theory and construction of devices, mechanical — pneumatic methods for the measurement of pressure, vacuum, temperature, flow, viscosity, specific gravity, level.

Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

INSTRUMENTATION — INST 130/131

Prerequisite — Applicant should be employed in Instrumentation or an associated field.
Course Content — Applied physics, pneumatic and electronic instruments, control theory and systems application, final control elements including valve sizing. Analysis equipment including speed, pH, humidity chromatography.

Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

COMPUTER CONTROL PRINCIPLES I — INST 203

Prerequisite — Mathematics and electronic background.
Course Content — Introduction to the binary concept, principles of digital logic, Boolean algebra, the rules for logical manipulation, digital subsystems, digital systems.

Monday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

AUTOMATIC CONTROL PRINCIPLES II — INST 300

Prerequisite — Automatic Control Principles I — INST 200.
Course Content — Control considerations; exponential lag, step response and frequency response; distributed lag, step and frequency response. Process combinations, frequency response and step response; controller forms; process and controller combination. Elementary system stability, the closed loop, disturbances in the closed loop, control system design.

Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

BASIC INSTRUMENTATION ELECTRONICS — INST 900

This course is designed primarily for pneumatic instrumentation personnel who wish to study the basic fundamentals of electronic instrumentation. The course consists of lectures, experiments and practical applications.
Course Content — Ohm's Law, series and parallel circuits, test instruments, basic electron tube and transistor theory, thermocouples, potentiometric devices, wheatstone bridge, radiation and optical pyrometry, calibration and troubleshooting techniques.

Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

NUCLEAR REACTOR TECHNOLOGY — INST 902 X

This is a general introductory course. The emphasis is on the safety aspects of operating a nuclear reactor. It should interest the general public as well as those directly involved with nuclear power.
Prerequisite — Basic knowledge of physics.
Course Content — Energy conversion, nuclear teminology, nuclear energy; nuclear reactors and other uses of nuclear energy; radio isotopes; fuel and fuel management; radiation theory; sources of radiation in a nuclear generating station; radiation exposure; effects of radiation on materials; biological effects of radiation; radiation measurement; contamination detection, measurement and control; disposal of radioactive waste.

Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.

INSTRUMENTATION FOR SUPERVISORS — INST 903X

This course is designed especially for people in industry who are not involved directly with process instrumentation but who desire an understanding of this subject to assist them in their own work.

Course Content — Fundamentals of measurement and control, pressure instruments, flow instruments, temperature instruments, level instruments, final control elements, electric transducers, recorders. Organization and function of istrument laboratory. Position of the instrument technician/technologist/engineer in Canadian industry.

Thursday — 7:00 to 10:00 p.m. 30 hrs. Campus K.

WELDING I — WELD 900

This is a general course designed to teach the fundamentals of oxy-acetylene and electric arc welding.
Prerequisite — Ability to understand English well enough to absorb instruction.
Course Content — Basic principles of oxy-acetylene and electric arc welding. Safety precautions, types and uses of various oxy-acetylene flames, types and uses of various rods and electrodes, braze welding, use of fluxes, arc welding machine controls. Practice welding in the flat position using oxy-acetylene and electric arc equipment.

Choice of Tuesday or Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

WELDING II — WELD 901

This is a general course designed to supplement WELD 900.
Prerequisite — Successful completion of Welding I or equivalent experience.
Course Content — Theory of alternating and direct current, polarity, arc blow, shielded arc electrodes, classification, colour markings and selection of electrodes. Edge preparations, joint design, weld faults, manufacture and storage of oxygen and acetylene, basic welding metallurgy, control of distortion, testing of welds. Practice welding in all positions using oxy-acetylene and electric arc equipment.

Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

WELDING PRE-CERTIFICATION "A" (C.W.B.) — WELD 902

This is a course designed to improve the technical skills of candidates who are preparing to take the Canadian Welding Bureau all position metallic arc qualification test.
Prerequisite — Successful completion of WELD 900 and WELD 901 or equivalent experience.
Course Content — Safety precautions, function of electrodes coatings, electrode selection and application. Edge preparation, weld faults, welding techniques, setting up equipment. Testing of welds and operators, codes. Practice welding of fillet and butt joints in all positions using cellulose and low hydrogen electrodes.
Note: The College is *not* authorized to issue qualification cards on behalf of the Canadian Welding Bureau. A certificate from The George Brown College will be issued upon successful completion of this program.

Monday — 7:00 to 10:00 p.m. 60 hrs. Campus K.
Fee — $50.00.

WELDING PRE-CERTIFICATION "B" — WELD 903

This is a course designed to improve the technical skills of candidates who are preparing to take the Department of Labour all position metallic arc qualification test on plate.
Prerequisite — Successful completion of WELD 900 and WELD 901 or equivalent experience.
Course Content — Safety precautions, function of electrode coatings, electrode selection and application. Edge preparation, weld faults, welding techniques, setting up of equipment. Testing of welds and operators, codes. Practice welding of butt joints in all positions using cellulose and low hydrogen electrodes. Root and face guided bend test specimens will be taken from butt welds in all positions.
NOTE: Arrangements can be made to have the final practical test inspected by the Department of Labour who will issue the appropriate certification if the test conforms to code requirements. A slight additional fee is involved. In addition, George Brown College certification will be issued to all successful candidates.

Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus K.
Fee — $50.00.

PIPE WELDING "A" — Uphill Arc Welding — WELD 904

This is a course designed to teach the fundamentals of the uphill method of pipe welding using arc welding equipment and low hydrogen arc welding electrodes.
Prerequisite — (1) Successful completion of WELD 900, WELD 901, WELD 902 or WELD 903 or (2) Department of Labour or Canadian Welding Bureau certification for all positions.
Course Content — Pipe specifications, preparation of pipe, recommended fits and tolerances. Electrode selection and classification. Testing of welds and operators, codes. Practice welding using the uphill welding technique and low hydrogen arc welding electrodes.
NOTE: Arrangements can be made to have the final practical test inspected by the Department of Labour who will issue the appropriate certification if the test conforms to code requirements. A slight additional fee is involved. In addition, George Brown College certification will be issued to all successful candidates.
Fee — $50.00.

Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

PIPE WELDING "B" — Downhill Arc Welding — WELD 905

This course is designed to teach the fundamentals of the downhill method of pipe welding using arc welding equipment and cellulose arc welding electrodes.
Prerequisite — (1) Successful completion of WELD 900, WELD 901, and WELD 902 or WELD 903 or (2) Department of Labour or Canadian Welding Bureau Certification for all positions.

Course Content — Pipe specifications, preparation of pipe, recommended fits and tolerances. Electrode selection and classification. Testing of welds and operators, codes. Practice welding using the downhill welding technique and cellulose arc welding electrodes.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus K.
Fee — $50.00.

PIPE WELDING "C" — T.I.G. WELDING (HELIARC) — WELD 906

This is a course designed to teach the fundamentals of the uphill method of pipe welding using the T.I.G. process for the root pass and low hydrogen electrodes on succeeding passes.
Prerequisite — (1) Successful completion of WELD 900, WELD 901 and WELD 903 OR (2) Possession of Department of Labour or Canadian Welding Bureau certification for all positions and proficiency in use of low hydrogen electrodes.
Course Content — Pipe specifications, preparation of pipe, recommended fits and tolerances. Electrode classification and selection. Testing of welds and operators, codes. Setting up and adjusting T.I.G. equipment. Tungsten electrodes, shielding gases. Practice welding using the T.I.G. process for the root pass and low hydrogen electrodes for succeeding passes.
NOTE: Arrangements can be made to have the final practical test inspected by the Department of Labour who will issue the appropriate certification if the test conforms to code requirements. A slight additional fee is involved. In addition, George Brown College certification will be issued to all successful candidates.
Wednesday 7:00 to 10:00 p.m. 60 hrs. Campus K.
Fee — $50.00.

PIPE WELDING "D" — WELD 907

This is a course designed to teach the fundamentals of pipe welding using the oxy-acetylene process.
Prerequisite — (1) Successful completion of WELD 900 and WELD 901 OR (2) A minimum of six months continuous oxy-acetylene welding experience.
Course Content — Pipe specifications, pipe fittings, preparation of pipe. Types and sizes of welding rods, flame adjustments, safety precautions. Layout of pipe and templates. Testing of welds and operators, codes. Practice welding of 2", 4" and 6" diameter pipe in all positions, manual oxy-acetylene cutting.
NOTE: Arrangements can be made to have the final practical test inspected by the Department of Labour who will issue the appropriate certification if the test conforms to code requirements. A slight additional fee is involved. In addition, George Brown College certification will be issued to all successful candidates.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus K.
Fee — $50.00.

WELDING — MAINTENANCE — WELD 908

This is a course designed to teach the fundamentals of oxy-acetylene and electric arc welding and is specially designed to meet the needs of maintenance personnel.
Prerequisite — A basic knowledge of welding would be an asset.
Course Content — Maintenance of oxy-acetylene and electric arc auxiliary equipment, safety precautions. Techniques involved in joining a variety of metals, preheat and post-heat procedures. Demonstrations and practice in the joining of cast iron, stainless steel, and aluminum, silver brazing, hard facing and building up, oxy-acetylene and arc cutting, welding of tubing and pipe to plate, positional welding.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

METALWORK — ORNAMENTAL — WELD 909

This is a course designed for the hobbyist, and provides a general knowledge of the machines, tools, and materials essential to the art of ornamental iron work.
Course Content — Fundamentals of welding, safety precautions, selection of materials, fundamentals of design. Use of hand tools, methods of twisting, forming and fastening metals, forming of scrolls. Surface decoration, surface finishing, use of metal working equipment. Practical shop work consisting of the fabrication of various types of ornamental metal projects.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

INERT GAS WELDING (HELIARC) — WELD 910

This is a course designed to teach the fundamentals of manual tungsten inert gas (T.I.G.) and semi-automatic metal inert gas (M.I.G.) welding to persons who are qualified oxy-acetylene or electric arc welders.
Prerequisite — Successful completion of WELD 900 and WELD 901 or a minimum of six months continuous experience in oxy-acetylene or arc welding.
Course Content — Setting up and adjusting T.I.G. and M.I.G. equipment. Types, sizes and uses of tungsten electrodes, types and sizes of filler and aluminum using T.I.G. and M.I.G equipment.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus K.
Fee — $50.00.

WELD TESTING AND INSPECTION — WELD 911

This course is designed to teach the basic fundamentals of weld testing and inspection, and consists of lectures, demonstrations, and laboratory work. Candidates may supplement this course with Blueprint Reading for the Welding Trade.
Prerequisite — Candidates should have a general knowledge of welding.
Course Content — Inspection duties welding terms and processes. Qualification tests for welders. Demonstrations of incorrect welding techniques using various welding processes to illustrate the development of weld faults, heat-treatment. Preparation and testing of weld specimens using the following standard destructive and non-destructive methods; visual, tensile, hardness, fracture, bend, ultrasonic, magnetic particle, macroscopic, fluorescent penetrant and dye penetrant. Interpretation of radiographs.
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

CANADIAN WELDING BUREAU — ALUMINUM WELDING — WELD 912

This course is designed to teach the manual and semi-automatic welding of aluminum.
Prerequisite — Applicants must be enrolled in Canadian Welding Bureau Aluminum Welding Correspondence Course.
Course Content — Setting up and operation of manual and semi-automatic equipment, Tungsten, shielding gases, welding techniques, filler wires. Shop practice using manual and semi-automatic equipment on aluminum.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus K.
Fee — To be established by C.W.B.

WELDING TESTS

The Welding Department operates a testing program as a service to welders wishing to update their qualifications by taking welding tests leading to certification. As an additional service, practice sessions prior to testing can be arranged if required. All enquiries should be directed to the Assistant Chairman, Welding Department.

TECHNICAL DRAWING I — DR 100 — A.T.E.C. COURSE (Approved)

An introduction to drawing office practice. It includes basic instruction about instruments, lettering lines, applied geometry, third-angle orthographic projection, isometric projections, freehand sketching, conventions, sections, dimensioning tolerances, simple working drawings, fasteners, gearing, transmission units, pipe fittings and layouts, electrical drawing of simple and the more intricate circuitry, electrical symbols.
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.

BLUEPRINT READING FOR MACHINE TRADES — DR 130

The aim of this course is to provide tradesmen with a basic understanding of blueprint reading.
Course Content — Freehand sketching: Freehand sketching of simple and complex objects using multiview, isometric and oblique projections. Blueprint reading: Study of methods of representation of objects including orthographic multiview, isometric and oblique projection. Dimensions and tolerances, notes and specifications, surface finish. Auxiliary views, sections. Threads and fasteners. Gears and cams, simple developments. Detail assembly drawings. Methods of reproduction of drawings.
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.

PLATE AND STRUCTURAL LAYOUT — DR 134

Course Content — Plane geometrical constructions and terminology, orthographic projection, principal and auxiliary views, dimensioning systems, basic principles of descriptive geometry, true length of lines, true shape of planes, true angles, revolutions and intersection of planes, developments by parallel line, radial line and triangulation methods, structural shapes, symbols and specifications, layout and development of industrial projects involving plate and structural shapes, fabricating methods, shop notes and bills of material.
Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.

BLUEPRINT READING FOR THE WELDING TRADE — DR 147

Course Content — Orthographic three view projection, linework, notes, dimensioning principles, working drawings, drawing to scale, auxiliary views, technical freehand sketching. A study of welded detail and assembly drawings and industrial blueprints, shop notes, small tool operations, fabrication specifications. Welding symbols as specified by the Canadian Welding Society. Structural shapes and symbols, plate specifications, bills of material, conventional practices, sectional views, blueprint reading methods.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.

PROCESS PIPE DRAFTING — DR 902 — A.T.E.C. COURSE (Approved)

For people who wish to become familiar with the techniques of process pipe drafting.
Prerequisite — Basic knowledge of Mechanical Drafting.
Course Content — Pipe drawing using single and double line symbols, orthographic, oblique, isometric and developed methods of representation. Pipes, values, standard sizes, materials and methods of fabrication. Schematic and flow diagrams, simplified piping layout.
Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.

TECHNICAL DRAWING II — DR 903 — A.T.E.C. COURSE (Approved)
This course is a continuation of Technical Drawing I. The individual topics are treated in greater depth.
Prerequisite — DR 100 or equivalent.
Course Content — Bearings, types, materials, lubrication, selection from manufacturers' catalogues. Cam design, motion diagrams, types of motion, cam layouts, types of followers, detail drawing and applications. The use of catalogues for selecting fasteners, fittings, springs and other standard components. Production dimensioning techniques, unilateral and bilateral tolerances, concentricity, machine fits, dimensioning problems. Engineering materials, ferrous and non-ferrous metals, plastics, rubber, fibre, production methods, relative costs; gauges and gauge design, basic principles, snap, ring, length, and plug types. Industrial drawing applications, design and layout drawings, detail drawings, sub-assemblies and assembly drawings.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.

MATERIALS HANDLING AND PLANT LAYOUT DESIGN — PART I — DR 906 A.T.E.C COURSE (Approved)
The aim of the course is to provide the student with a basic knowledge of Modern Packaging and Handling Techniques in relationship to efficient plant layout.
Prerequisite — Basic Knowledge of Mechanical Drafting.
Course Content — Study of Materials handling, principles of good materials handling, flow charts and diagrams, plant layout, horizontal and vertical movement of materials, modern packaging techniques, case histories of materials handling layout, safety aspect and reliability of equipment, selection of equipment, maintenance of equipment, use of engineering catalogues.
Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.

TOOL DESIGN PART-TIME COURSES
An evening student may study individual courses or he may complete a prescribed program of courses as credits toward a diploma as a Tool Design Technician. Details of the program are shown in the 1971/72 day calendar and in the Tool Design Technician brochure. Some credits may be granted to mature students on the basis of previous education or experience. Enquiries should be made at the Registrar's Office, 37 Dartnell Avenue.

TOOL DESIGN COURSES
Prerequisite — Grade XII, preferably with machine shop or drafting option or equivalent industrial experience. Students without previous drafting experience should register for Techanical Drawing I, DR 100.

JIG AND FIXTURE DESIGN I — TD 100 — AT.E.C. COURSE (Approved)
Course Content — Freehand sketching and machine drafting of basic jig and fixture designs, emphasizing current production methods and organization.
Tuesday — 7:00 to 10:00 p.m. 90 hrs. Campus CL.

JIG AND FIXTURE DESIGN II — TD 101 — AT.E.C. COURSE (Approved)
Prerequisite — TD 100.
Course Content — Freehand sketching and machine drafting of advanced jig and fixture designs, emphasizing current production methods and organization.
Tuesday — 7:00 to 10:00 p.m. 90 hrs. Campus CL.

JIG AND FIXTURE DESIGN III — TD 102
Prerequisite — TD 101.
Course Content — Freehand sketching and machine drafting of assembly and welded jigs and fixtures, emphasizing current production methods and organization.
Tuesday — 7:00 to 10:00 p.m. 30 hrs. Campus CL.

JIG AND FIXTURE DESIGN IV — TD 103
Prerequisite — TD 101.
Course Content — Freehand sketching and machine drafting of cutting tool design, multi-tool layouts and gauge design, emphasizing current production methods and organization.
Tuesday — 7:00 to 10:00 p.m. 30 hrs. Campus CL.

DIE DESIGN I — TD 200 — A.T.E.C. COURSE (Approved)
Prerequisite — DR 100.
Course Content — Freehand sketching and machine drafting of basic blanking, piercing, cut-off and bending dies.
Thursday — 7:00 to 10:00 p.m. 90 hrs. Campus CL.

DIE DESIGN II — TD 201 — A.T.E.C. COURSE (Approved)
Prerequisite — TD 200.
Course Content — Freehand sketching and machine drafting of advanced blanking, piercing and bending dies. Introduction to basic draw dies.
Thursday — 7:00 to 10:00 p.m. 90 hrs. Campus CL.

DIE DESIGN III — TD 202
Prerequisite — TD 201.
Course Content — Freehand sketching and machine drafting of advanced draw dies and complex blank, pierce and bend progressive dies.
Thursday — 7:00 to 10:00 p.m. 90 hrs. Campus CL.

DIE DESIGN — MOULDS — TD 203 — A.T.E.C. COURSE (Approved)
Prerequisite — TD 200.
Course Content — Principles of injection mould design involving freehand sketching and some design.
Monday — 7:00 to 10:00 p.m. 90 hrs. Campus CL.
An advanced Mould Design course may be offered.

TOOL DESIGN THEORY — TD 907
Involves theory of tool design only. Various areas of manufacturing engineering are covered, e.g. cutting tool design, process planning, turret and auto lathe layouts, economics, location and clamping theory. Practical drafting will be a minimum.
Monday — 7:00 to 10:00 p.m. 90 hrs. Campus CL. Fee: $40.00.

PRODUCTION AND INVENTORY CONTROL I — TD-900
This course is offered in co-operation with the Canadian Association for Production and Inventory Control. The objectives of the course are:
(a) to acquaint those who have recently entered this field with the fundamental techniques being applied in this area of management;
(b) to emphasize the practical application of techniques that have proven successful in a number of companies representing a wide cross-section of industry;
(c) to offer an insight into this field for supervisors engaged in areas of management related to production and inventory control.
The lecturers are practitioners or consultants in production and inventory control. Each session will centre around participation by those enrolled in the course. Registration will be limited to encourage discussion among the students and with the instructor at each session. Additional experts will be called upon to assist in the lecturing.

PRODUCTION CONTROL
Course Content — Introduction to production and inventory. What is expected of production control? Quotas, forecasts and budgets; long range planning, short range planning; processing the production order, control techniques, cycle time control, case study, reporting and follow-up, data processing and production control.

INVENTORY CONTROL — TD 901
Course Content — Principles and functions of inventory control. Identification and classification; stock records cards ad their use, control of inventory, policy. Re-ordering systems, case study exercise, practical applications, data processing and inventory control, summation and test, what management requires of an inventory control system.
Tuesday — 7:15 to 9:45 p.m. 70 hrs. Campus CL.
Fee — $40.00.

WORKSHOP TECHNOLOGY — MACH 110 — A.T.E.C. COURSE (Approved)
Prerequisite — Grade XII
Course Content — Review of basic manufacturing processes, metal cutting, precision measurement and inspection; centre, capstan and turret lathes, horizontal and vertical mills, surface and cylindrical grinders, jig boring, broaching, die-sinking, centerless grinding, electro-discharge and electro-chemical machinery numerical control.
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.

JIG AND FIXTURES I — MACH 120
Prerequisite — MACH 140, 141, 142, 143 or equivaent.
Course Content — Layout procedures, fitting, fastener application, part planning, jig and fixture parts. Milling, welding, grinding and assembly fixtures, drill jigs.
Monday — 7:00 to 10:00 p.m. 90 hrs. Campus CL.

A, B, & C BENCHWORK — MACH 140
This program is designed for people who wish to acquire basic skills and knowledge in measurement, layout and benchwork fitting.
NOTE: This is an introductory course and is common to all machine shop courses.

MEASUREMENT — MACH 140A
Course Content — Basic types of measuring tools, gauges, indicators, micrometers, verniers, optical testing tools, surface finish.
Monday — 7:00 to 10:00 p.m. 15 hrs. Campus CL.

LAYOUT — MACH 140B
Prerequisite — MACH 140A or equivalent.
Course Content — Surface plate, scribers, surface gauge, dividers, punches, rules, calipers, angle plates, squares, vernier height gauges, protractors. Indexing plain and rapid, co-ordinate measurement, Sine bar. Assignments and practical applications.
Monday — 7:00 to 10:00 p.m. 15 hrs. Campus CL.

BENCHWORK — MACH 140C
Prerequisite — MACH 140A and 140B or equivalent.
Course Content — The care and use of hand tools such as hammers, files, chisels, hacksaws. Related machine operations such as drilling, reaming, tapping, counterboring, bandsawing, band filing and band welding.
Monday — 7:00 to 10:00 p.m. 30 hrs. Campus CL.
NOTE: 140A, 140B, and 140C can be taken separately or consecutively. If they are taken consecutively, they total 60 hours.

LATHEWORK — MACH 141A, 141B, & 141C
This program is designed for people who wish to acquire basic skills and knowledge in the operation of a lathe.

BASIC — MACH 141A
Prerequisite — MACH 140 or equivalent.
Course Content — Lathe construction, operation, safety and accessories. Theory of metal cutting, sharpening tool bits, plain turning, knurling, drilling, counter boring and tapping, form turning. Steady and follower rest work.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.

INTERMEDIATE — MACH 141B
Prerequisite — MACH 141A or equivalent.
Course Content — Indicating, four jaw chuck work. Taper theory and taper turning, profile turning, spring winding, grinding attachments.
Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.

ADVANCED — MACH 141C
Prerequisite — MACH 141B or equivalent.
Course Content — Thread types, theory and cutting, single and multiple start threads. Eccentrics, boring. Turret lathe theory.
Thursday — 7:00 to 10:00 p.m. — 60 hrs. Campus CL.

MILLING — MACH 142A
Prerequisite — MACH 140 and 141 or equivalent.
This programm is designed for people who wish to acquire basic skill and a knowledge in milling.
Course Content — Milling machine construction and operation of various types of milling machines, work holding devices, cutters and attachments, speeds, feeds, and safety precautions. Flat, angular and form milling, fly cutting, and cutting fluids. Basic heat-treatment.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.

MILLING — MACH 142B
Prerequisite — MACH 142A or equivalent.
Course Content — Theory and practice in the use of dividing head, with special attention to differential and angular indexing gear theory, gear cutting, helical milling theory with special emphasis on mathematical problems in helical milling. Jig boring, contour tracing, pantograph and slotting.
Thursday — 7:00 to 10:00 p.m. — 60 hrs. Campus CL. Fee: $26.00.

GRINDING — MACH 143
Prerequisite — MACH 140 and 141 or equivalent.
This course is designed for people who wish to acquire basic skills and knowledge in precision grinding.
Course Content: Surface grinding: Construction and operation, mounting wheels, methods of holding work, principles of magnetic chuck, demagnetizing, grinding work square. Use of sine-chuck for grinding accurate angles, safety precautions. Cylindrical grinder, principal parts and operation, internal and external grinding, parallel and taper grinding. Tool and Cutter: purpose, theory and practice in sharpening various cutters. Form grinding, grinding wheel theory.
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.

DIEMAKING I — MACH 204
Prerequisite — MACH 140, 141, 142, and 143 or equivalent.
Course Content — Punch press theory and operation, press brake theory and operation. Theory, development, construction and operation of the following types of dies: cut-off, trim, pierce, bending, blank, forming, compound.
Monday and Wednesday — 7:00 to 10:00 p.m. 90 hrs. Campus CL.

MECHANICAL MAINTENANCE — MILL 900
This course is designed for those working as maintenance mechanics who wish to improve their knowledge of mechanical components, their functions, limitations, and service procedures.
Course Content — Belt drives, chain drives, gears, shafts, keys, couplings, bearings, variable speed transmissions, clutches, brakes and seals.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.

MOULDMAKING I— MACH 901
Prerequisite — Considerable general machining experience.
Course Content — Safety, mould construction, parts and functions, types of steels used, accuracy, tolerancing, shrink factors, principal thermoplastics and their applications, specialized hand tools and equipment, finish on moulds, machining mould parts, heat treatment, lapping, assembly and tryout.
Monday — 7:00 to 10:00 p.m. 90 hrs. Campus CL.

NUMERICAL CONTROL (MILL OPERATION) — PART I — MACH 902
This course is designed for persons who wish to gain a good basic practical background in the application and operation of Numerical Control Machines.
Prerequisite — General Machining Experiences.
Course Content — Applications, justification, axes, coordinates, quadrants, systems, tapes and codes, programming, tape preparation, machine set-up and operation.
Thursday — 7:00 to 10:00 p.m. 30 hrs. Campus CL.

NUMERICAL CONTROL — PART II — MACH 903
Prerequisite — MACH 902.
Course Content — Advanced problems; programming and machine set-ups.
Monday — 7:00 to 10:00 p.m. 30 hrs. Campus CL.

ELECTRICAL DISCHARGE MACHINING EDM — MACH 904
Prerequisite — Thorough knowledge of Machine Shop Practice.
Course Content — "Hands on" training in the operation of resistance — capacitance and pulse type power supply E.D.M. equipment. Theory of discharge process, dielectrics, tool wear and overcut. Theory and practice of electrode manufacture, using lathes, mills, grinders and pantograph.
Saturday — 9:00 a.m. to noon. 36 hrs. Campus CL.

GENERAL INFORMATION REGARDING PART-TIME COURSES IN PLASTICS

SHIFT WORKERS
Our present policy is to permit those who cannot attend regular classes to attend the College between the hours of 9:00 a.m. to noon, Monday through Thursday, in lieu of attending evening classes. Dates and times must be pre-arranged.

TECHNICIAN AND OPERATOR PROGRAMS
The courses prescribed for these programs are identical to those listed in the day calendar for full-time students. Part-time students can qualify for a certificate or diploma through extension courses.
The Technician A program is equivalent to a two-year daytime course and covers both thermosets and thermoplastics, plus related subjects.
The Technician B program is equivalent to a one-year daytime course and covers either thermosets or thermoplastics, plus related subjects.
Four Mechanic Programs are offered:
Thermoplastic — 1 — Machine Moulding
Thermoplastic — 2 — Forming and Fabricating
Thermosets — 1 — Hand Lay-up and Spray-up
Thermosets — 2 — Machine Moulding
In addition to the technical courses, related subjects such as mathematics, physics, chemistry, language and communication, plus business organization are required in order to qualify for a certificate or diploma. Related subjects may be studied by extension as and when they are offered.
For some courses, enrolment is limited.

THERMOSET MATERIALS — PROCESSES AND DESIGN — PL 125
The student may select any, or all of the assignments for the three subject areas listed below.

MATERIALS THERMOSET
Course Content — History and introduction to polyester and Epoxy resins. Reinforcements and fillers. Composites. Strength of material definitions.

PROCESSES THERMOSET
Course Content — Theory and application of thermosetting plastic processes. Pattern and mould making. Hand lay-up, spray-up, filament winding.

DESIGN THERMOSET
Course Content — Design characteristics for glass fibre reinforced plastics. Throw-away and plaster tooling. Reinforced plastic moulds and tooling. Wooden and metal moulds. Cost estimating.
Technical References:
Plastics Engineering Handbook by Society of the Plastics Industry.
Publisher. Reinhold.
Handbook of Reinforced Plastics by Oleesky and Mohr.
Publisher: Reinhold.

Modern Plastics Encyclopedia. Modern Plastics Magazine.
Publisher: McGraw-Hill.
Fibreglas Canada Limited. Booklets Nos. 1, 2 and 3.
Canadian Gypsum Co. Ltd., Bulletin No. IGL 102 (re: Plaster Moulds).
Tuesday — 7:00 to 10:00 p.m. 90 hrs. Campus CL.

FORMING AND FABRICATING OF THERMOPLASTICS — PL 900

While the bulk of the thermoplastic articles that we see to-day are mass-produced on expensive equipment, there are still many articles made by forming and fabrication from sheet, castings, or shapes. Some of these are: car bodies, boats, signs, skylights, architectural models, mechanical models, works of art.
Equipment required can be quite inexpensive and much of this work can be carried out in the home using common household tools.
It should be of interest to people who are engaged in this type of production: model-makers, architects, engineers, hobbyists, artists.
Course Content — Machining, forming, welding, cementing, engraving, decorating and finishing of thermoplastics materials.
Tuesday — 7:00 to 10:00 p.m. 30 hrs. Campus CL.
October 5, 1971 to December 7, 1971.

INTRODUCTION TO PLASTICS — PL 901

This course comprises lectures and demonstrations and includes materials, their properties and end uses.
Course Content — Thermoplastics and reinforced thermoplastics. Polystyrenes, vinyls, polyolefins, engineering thermoplastics, reinforced thermoplastics. Converting processes; designing with plastics.
Thursday — 7:00 to 10:00 p.m. 30 hrs. Campus CL.
October 7, 1971 to December 9, 1971.

EXTRUSION — PL 902

This course is a prerequisite for a number of other plastics courses.
Prerequisite — PL 901 or equivalent industrial experience.
Course Content — Operating principles, components and nomenclature, drive systems, screw design. Heating and cooling; instrumentation and control, maintenance; multi-screw extruders.
Thursday — 7:00 to 10:00 p.m. 30 hrs. Campus CL.
January 6, 1971 to March 9, 1972.

DESIGNING WITH PLASTICS — PL 903

The purpose of this course is to assist designers to understand the properties and processing methods used with plastics materials and to select materials appropriate to a product function.
Prerequisite — PL 901 or equivalent industrial experience.
Course Content — Design procedure and design considerations. Materials properties, processing methods, testing. Case histories.
Wednesday — 7:00 to 10:00 p.m. 30 hrs. Campus CL.
January 5, 1971 to March 8, 1972

COMPOUNDING AND COLOURING — PL 904

Prerequisite — PL 902 or equivalent industrial experience.
Course Content — Equipment and processes, colour compounding, P.V.C. compounding. Dry blending. Fire retardants. Testing and quality control.
Wednesday — 7:00 to 10:00 p.m. 30 hrs. Campus CL.
March 15, 1972 to May 17, 1972.

INJECTION MOULDING — PL 905

Prerequisite — PL 902 or equivalent industrial experience.
Course Content — Injection, clamping and hydraulic systems, electrical controls. Heating and cooling. Maintenance and troubleshooting.
Thursday — 7:00 to 10:00 p.m. 30 hrs. Campus CL.
March 16, 1972 to May 17, 1972.

BLOW MOULDING — PL 906

Prerequisite — PL 902 or equivalent industrial experience.
Course Content — Systems, manifolds, valves, accumulators. Dies, moulds, programming. Clamping systems, post treatment, maintenance, trouble-shooting. Testing, quality control.
Monday — 7:00 to 10:00 p.m. 30 hrs. Campus CL.
March 13, 1972 to May 15, 1972.

PLASTIC FILM — PRODUCTION, TESTING AND APPLICATIONS — PL 907

Prerequisite — PL 902 or equivalent industrial experience.
Course Content — Dies, cooling; film handling systems; winding, treating, printing. Cast and laminated film, testing, end uses, bagmaking, printing.
Thursday — 7:00 to 10:00 p.m. 30 hrs. Campus CL.
March 16, 1972 to May 18, 1972.

GENERAL CHEMISTRY — CHEM 100

Course Content — METHODS OF CHEMISTRY: Physical and chemical changes, chemical terminology. ORGANIC CHEMISTRY: Structure and reactions of common aliphatic groups. STATES OF MATTER: Gas laws, partial pressure. NUCLEAR CHEMISTRY: Basic nuclear particles, isotopes, radioactivity, half life, radioisotopes and uses. EQUILIBRIUM: Rate of reaction, reversibility, LeChatelier's Principle, equilibrium constant, solubility as an equilibrium process, methods of expressing solubility and concentration, ion exchange. ACIDIMETRY AND HYDROLYSIS: Definitions, pH, indicators, titrations, relation to oxidation and reduction. ELECTRO-CHEMISTRY: Electrolysis, Faradays Law, electro-chemical series, corrosion.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.

POLYMER CHEMISTRY — CHEM 210

Prerequisite — CHEM 100.
Course Content — The chemistry and physics of natural and synthetic polymers covering the following topics: Molecular forces and chemical bonding, molecular weight and its distribution, configurations and conformations of polymar chains, morphology, condensation and addition polymers, copolymers, methods for determinating molecular weight of polymers, structure of polymer molecules, how structure determines properties of polymers, testing and degradation of polymers, rheology of polymers. Emphasis will be placed on common plastic materials. Practical work in the laboratory.
Thursday — 7:00 to 10:00 p.m. 90 hrs. Campus CL.

COATINGS TECHNOLOGY — CHEM 901

This program is intended to assist paint industry employees, those who have only recently entered the paint and allied raw materials industries and those who feel the need for a refresher course in the fundamentals of paint technology. Their increased knowledge will allow them to function more effectively in the paint industry.
The course has been organized to conform to the standardized basic course in Paint Technology Education Committee.
Course Content — Introduction, extender pigments, white prime pigments, inorganic and organic coloured pigments, colour and its measurements, oils for pait, basic polymer chemistry, alkyd resins, synthetic and natural resins, solvents, driers and paint additives, trade sale finishes (emulsion & solvent based types); exterior finishes for houses and buildings, calculations for formulation, industrial finishes, cellulose derivatives and lacquers, corrosion and chemical resistant finishes, surface preparation, methods of application, paint manufacture & testing, future trends in coatings.
Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.

A comprehensive program of part-time short courses will be offered by George Brown College in conjunction with the Ontario Chapter of Canadian Society for Nondestructive Testing.
Registration is to be made through the Education Committee, CSNT, 29 Colborne Street, Suite 309, Toronto 215, Ontario.

ULTRASONIC TESTING I — TEST 900

This will be a basic course in ultrasonic testing, particularly of interest to the individual who is preparing to write his Junior Level Ultrasonic Testing examination .The topics have been selected to give the student the full theoretical background necessary to pass the CGSB test.
Course Content — Introduction and testing philosophy, test principles, applications and capabilities, equipment, testing techniques, calibration.
Textbook: General Dynamics Classroom Training Handbook CT-6-4, Ultrasonic Testing.
Monday — 7:00 to 10:00 p.m. 30 hrs. Campus CL.
October 1971

EDDY CURRENT TESTING I — TEST 901

A basic course in eddy current testing will be directed to technicians who are using the equipment, to supervisors and others who require a basic understanding of the method, and to those who wish to generally broaden their knowledge in non-destructive testing.
Course Content — Introduction and testing philosophy, test principles, applications and capabilities, equipment, testing techniques calibration.
Textbook: General Dynamics Classroom Training Handbook, CT-6-5 Eddy Current Testing.
Saturday — 9:00 a.m. to 12:00 p.m. 30 hrs. Campus CL.
Not offered in October 1971.

ULTRASONIC TESTING II — TEST 902

This course will be specifically directed to the man whose work requires that he be able to interpret the results of an ultrasonic test. An introduction to test basics will be given but the stress will be on results and their interpretation. Inspectors, engineers and supervisors will find this course of value.
Course Content — Introduction and testing philosophy, test principles, equipment applications and capabilities, results, records and interpretation, certification and capabilities, results, records and interpretation, certification procedures and regulatory codes.
Textbook: General Dynamics Classroom Training Handbook, CT-6-4, Ultrasonic Testing.
Monday –- 7:00 to 10:00 p.m. 30 hrs. Campus CL. January 1972.

INDUSTRIAL RADIOGRAPHY I — TEST 903

This course will be directed to the radiographer who will be eligible to write his Junior Industrial Radiographer examination,and will provide formal preparation for all phases of the examination. It will also be of interest to personne in supervisory, quality assurance, or affiliated positions who require a knowledge of the fundamentals of radiography.
Course Content — Introduction to electromagnetic spectrum, velocity, frequency, and wavelength of light; generation of X-rays and gamma rays; mathematics of radiography — inverse square law, law of reciprocity; radiographic sensitivity — definition and contrast; aids to radiographic sensitivity; film — types and classes — densitometry — sensitometry; exposure charts; darkroom procedures and processing of film; records and standards; radiation protection — Federal and Provincial Regulations — safe working conditions; radiographic techniques; film interpretation.
Textbook: Canadian Government Specifications Board, Industrial Radiography 48-GP-5.
Saturdays — 9:00 a.m. to 4:00 p.m. 60 hrs. Campus CL. January 1972.

INDUSTRIAL RADIOGRAPHY II — TEST 904

This course will be specifically directed to the man whose work requires that he be able to interpret the results of X-ray tests. While some time will be spent on equipment and basic principles, the stress will be on results and their interpretation. Inspectors, engineers, and supervisors will find this course of value.
Course Content — Basic principles, equipment applications and capabilities, results, records, and interpretation, certification procedures, and regulatory codes.
Textbook: Canadian Government Specifications Board, Industrial Radiography 48-GP-5.
Saturday — 9:00 a.m. to 12:00 p.m. 30 hrs. Campus CL. October 1971.

BUSINESS EQUIPMENT SERVICING, Part I — BES 900

The aim of this course is to familiarize the student with the operating principles of the various parts of a typewriter and teach him to correct malfunctions that may occur on these machines.
Prerequisite — Grade 10 or some experience in the business machine field.
Course Content — Checking, troubleshooting, analysing of mechanisms and their operations, corrective adjustments. Assembling and disassembling procedures of the major machine parts.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.

BUSINESS EQUIPMENT SERVICING, Part II — BES 901

Adding machine servicing — in this course the student will be taught the operating principles and servicing of adding machines.
Prerequisite — Grade 10 or students should be employed in the business machine industry.
Course Content — Theory of adding machines, tape, reading, trouble-shooting, repairing, adjusting. Checking and replacement of parts such as printing mechanism, stop section racks units, power unit and accumulation units.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.

ELECTRIC WATCH SERVICE — WATCH 900

Prerequisite — Qualified watchmakers.
Course Content — Introductory electricity, Bulova, Accutron, Hamilton electric watches, Swiss electric watches, Timex electric watches. Theory and practical servicing and testing.
Monday and Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.

WATCHMAKING — WATCH 901

Prerequisite — Currently employed in the watchmaking industry.
Course Content — Lathe work, balance work, hairspring work, clock work, watch conditioning, escapement matching, jewelling, making staffs and stems, adjusting, complicated watches, preparation for Canadian Jewellers' Association examinations.
NOTE: Each section must be successfully completed before further advanced training may be undertaken.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.

WATCHMAKING (ADVANCED) — WATCH 902

This is a pre-examination course for candidates seeking Ontario certification as a watch repairer.
Prerequisite — Applicants must be qualified watchmakers willing to study modern advanced theory of watch construction, repair and adjustment.
Tuesday and Thursday — 7:00 to 10:00 p.m. 120 hrs. Campus CL.

ABOVE KNEE AMPUTATIONS — PROS 900

Prerequisite — Students must be currently engaged as technicians in the Prosthetics field.
Course Content — Theory — Anatomy, physiology, pathology, indications for amputation, prescriptions, charts and knee mechanisms. Practice — Negative casts, positive casts, modifications, preparation for laminate, vacuum lay-up, manufacturing shins, alignment, transfer, finishing processes.
Monday and Thursday — 7:00 to 9:00 p.m. 40 hrs. Campus CL.

BELOW KNEE AMPUTATIONS — PROS 901

Prerequisite — Students must be currently engaged as technicians in the Prosthetics field, plus completion of PROS 900.
Course Content — Theory — Anatomy, physiology, pathology, indications for amputation, prescriptions and charts. Practice — Negative casts, positive casts, modifications, preparation for laminate, vacuum lay-up, manufacturing shins, alignment, transfer, finishing processes.
Monday and Thursday — 7:00 to 9:00 p.m. 40 hrs. Campus CL.

PROS 900 and PROS 901 will be offered consecutively. Similar courses in Orthotics may be offered.

STANDARD PRACTICES OF FOOTWEAR MANUFACTURE — SHOE 900

Course Content — Feet and lasts, pattern cutting, upper cutting, fitting, bottom stock, lasting and making, finishing, shoeroom.
Tuesday — 7:30 to 9:30 p.m. 60 hrs. Campus CL.

NOTE: Other courses may be offered in conjunction with the Ontario Branch of the British Boot and Shoe Institution.

FOOD TECHNOLOGY

FOOD & HOSPITALITY INDUSTRY COURSES

BEVERAGE SALES AND SERVICE (Cocktail Bartending) — FA 206

Prerequisites — A basic course for cocktail bartending. This course is open to men or women twenty-one years of age and who are currently working full or part time in a licensed establishment.
Course Content — Bar layout and equipment, manufacture of alcoholic beverages, beverage selection, storage and control. Duties of the bartender, pre-opening preparation, theory of mixed drinks, practical preparation of mixed drinks and cocktails, sales and service of alcoholic beverages, selection of wines and their service. Human relations relating to licensed establishments.
Monday — 7:00 to 10:00 p.m. 30 hrs. Campus K.
Fee — $50.00.

HOTEL FRONT OFFICE ACCOUNTING PROCEDURES — FADM 211

Prerequisites — Grade XII or experience in the Hotel/Motel Industry.
This course is designed for those currently employed in the industry who seek a position in the front office, for those currently employed in the front office who seek advancement and for those in the accounting department who wish to further their knowledge of Hotel Accounting.
Course Content — The function of the front office and its methods of operation, the theory of proper billing procedures for hotel guests, a demonstration of the various accounting machines and forms used in the front office, an extensive night audit procedure including practical work on the accounting machines to enable the student to understand and accurately balance a front office audit.
Tuesday — 7:00 to 10:00 p.m. 30 hrs. Campus K.
Fee — $15.00.

PRACTICAL BAKING — BK-10-1A

This course is designed for those who wish basic knowledge of baking. Lectures, demonstrations and student participation are combined to convey both practical and theoretical aspects of the art of baking.
Course Content — Quick breads, pies and tarts, puddings, bread and rolls, sweet yeast products, puff pastries and pate aux choux, icings and fillings, cake and cookies — ready mixes and other convenience products.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus K.
Fee — $26.00.

CAKE DECORATING AND DESIGN I — BK 10-1C

Prerequisites — This course is designed for those persons who wish to learn the art of cake decoration and design.
Course Content — Icings and coatings, royal icing, fondants, butter creams, couvetures, boiled icing and frostings, basic design, techniques of piping, decorating materials, methods, freehand geometric designs, stencils, runouts, prefabricated decorations, lettering, flowers, border design, etc.
Cakes for special occasions — techniques and methods.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus K.
Fee — $26.00.

PRACTICAL COOKING COMMERCIAL I — CHEF 10-1A

Prerequisites — This course is offered to those persons in the food industry who have little or no knowledge of cooking. Lectures, demonstration and students participation are designed to teach practical and theoretical food preparation and cooking. Emphasis will be placed on variations of taste and texture in normal everyday foods.
Course Content — Culinary basics, soups and sauces. Methods of cooking for meats, poultry, fish and seafoods. Various methods and techniques of preparing roasts, stews and casseroles with accompanying sauces and garnishes. Salad preparation with suitable dressings. Vegetable egg cookery and larder preparation are also practiced in this course.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus K.
Fee — $30.00.

RETAIL MEAT CUTTING COURSES

RETAIL MEAT CUTTING AND BUTCHERY — MC 900

Prerequisites — This course is designed for persons in junior positions in the retail trade and people interested in the skill of meat cutting.
Course Content — Lecture and Demonstration — Cutting, grading and characteristics of beef, lamb, pork and veal carcasses, preparation of poultry, fish and shellfish for retail sale, displaying and merchandising of all types of meat products, special lectures on sanitation and refrigeration. Students will participate in meat cutting during the course, this will include boning and tying of various meat products.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus K.
Fee — $26.00.

RETAIL MEAT STORE MANAGEMENT — MC 901

Prerequisites — This course is offered to those people who have a basic knowledge of meat and who wish to upgrade their knowledge for advancement to the position of manager, and for any person actively engaged in a meat store operation.
Course Content — Financial control of a retail operation, personnel training and relations, buying, receiving and storing for profit, meat department security, display and merchandising techniques, customer relations, sanitation for profit, increasing profits through deli and fish.
Monday — 7:00 to 10:00 p.m. 30 hrs. Campus K.
Fee — $15.00.

FOOD PROCESSING AND MANUFACTURING

FOOD ADDITIVES AND NUTRITION FOR THE CONSUMER — FC 900

Prerequisite — More and more the consumer is demanding detailed information concerning the manufactured foods offered in various retail outlets. This course is designed to inform the consumer as to the modern techniques, with particular reference to the various additives, being employed in the Food Industry in Canada as well as their effect upon the nutritional quality of manufactured and processed foods.
Course Content — Definition of a food and additive. Modern food manufacture and the role played by additives. Identity of permitted food additives and regulations regarding their use. How is the nutritional quality affected by methods of manufacture and additives? Modern labelling regulations and their interpretation. Commercial food grades and their relation to consumer quality. A look at the future trends in food processing and manufacture from the consumer viewpoint.
Tuesday — 7:00 to 10:00 p.m. 75 hrs. Campus K.
Fee — $50.00.

FOOD PLANT SANITATION — FC 901

This course covers all aspects of food plant sanitation cleaning methods and materials, pest control, food spoilage, stautory regulations, packaging materials and methods pertaining to sanitation. Lecture materials will be supplemented with films, slides, demonstrations and guest lecturers. The course is designed for Quality Control Technicians, Production Foremen and Supervisors, Sanitarians, Food Microbiologists, Pest Control Operators and anyone engaged in the processing of food products and who wishes to update or refresh his memory in this vital aspect of food manufacturing.
Thursday — 7:00 to 10:00 p.m. 75 hrs. Campus K.
Fee — $60.00.

UNIT OPERATIONS AND FOOD MANUFACTURING — FT 900

Prerequisites — This course is designed for anyone presently employed in the Food Industry to whom the knowledge of the various unit operations and how they are employed in the manufacture of foods would be beneficial. Some of those who would find this course particularly of interest would be: Food plant inspectors from both goverament and industry; sales and marketing personnel, accounting, mechanical maintenance, etc.
Course Content — The various unit operations involved in food processing and manufacture will be discussed. The use of these unit operations in the various production lines of modern food manufacture will be detailed. Particular attention will be paid to descriptions of most of the typical lines of production used in the Food Industry today with reference to their strengths, weaknesses from both a production, quality and sanitation point of view.
Monday — 7:00 to 10:00 p.m. 75 hrs. Campus K.
Fee — $50.00.

FOOD MICROBIOLOGY — FC 200

Prerequisites — This course is designed for Food Technologists, Sanitarians, etc., to whom a knowledge of the role of microbiology in food is required. Post-secondary school training in the biological sciences, (biology, Biochemistry) as well as organic chemistry is required.
Course Content — An introductory course in Food Microbiology with emphasis on bacteriological techniques. The use and care of the microscope. The isolation of bacteria for the purpose of differentiation and classification by morphological, cultural and biochemical methods. The relationship of habitat to the occurance of micro-organisms of foods and in food manufacture. Physical, chemical and biological destruction. Methods of microbiology examination of food as well as public health and sanitation bacteriology. The role of micro-organisms in food manufacture.
Wednesday — 7:00 to 10:00 p.m. 25 wks. 75 hrs. Campus K.
Fee — $60.00.

DIPLOMA PROGRAM IN HAUTE CUISINE

This program is designed to meet the evergrowing demand for knowledge and practical experience in the creation of fine food and entertainment in the home. The entire program consists of 8 individual courses commencing with basic practical cooking, this will give the student the opportunity to apply the principles of cooking using the raw materials with tested recipes under the guidance of skilled chefs. This course will be followed in sequence by Practical Baking, The Art of Fine Dining, and the Principals of Managing Food. This will complete the first two semesters. The program will then continue with Advanced Practical Cooking, Creative Pastry and Desserts, Planned Entertainment for Pleasure and Appreciation of Wines, Spirits and Liqueurs. Each student on satisfactory completion of the individual courses will receive a Certificate of Competance and on completion of all the eight courses will be awarded a Diploma in Haute Cuisine.

FIRST YEAR

BASIC PRACTICAL COOKERY — F 900

Course Content — This course is designed to introduce the basic principles of cooking as related to fine food, to take the raw products and create the basic requirements for classical dishes, sauteing, broiling and stewing, cooking lean and fat fish, seafoods, and the accompanying vegetables, salads, garnishes and dressings. Using the knowledge and expertise of chefs, in the use of herbs, spices and wines.
Tuesday and Wednesday — 6:00 to 10:00 p.m. 15 wks. Campus K.
Fee — $75.00.

PRACTICAL BAKING AND DESSERTS — F 901

This course is designed to equip the student with a practical working knowledge of pastry doughs, choux paste, yeast dough and sponge goods, the use of icings, creams, puddings, custards, and other desserts, fruits, tarts, pies and quick breads, the high ratio and angel cake mixes, simple decoration and presentation of birthday and other occasion cakes.
Wednesday — 6:00 to 10:00 p.m. 10 wks. 40 hrs. Campus K.
Fee — $50.00.

THE ART OF FINE DINING, Part I HOME AND ABROAD — F 902

This course will introduce the intimate knowledge of fine dining whether at home, on the town or abroad, from the simple everyday meal to the more complex and exotic. How to plan the menu with attention to nutrition, quality and balance, the table settings, the floral arrangements, lighting and atmosphere, the techiques of arranging a dinner or lunch party at your favourite restaurant with attention to the details of special dishes and service that the occasion may demand, choosing guests and seating arrangement, anticipating the tastes of your guests.
Tuesday — 7:00 to 10:00 p.m. 7 wks. 21 hrs. Campus K.
Fee — $30.00.

PRINCIPLES OF MANAGING FOOD PART II — F 903

This course will give the student a sound and sensible approach to the ever present need for better knowledge of food products, their selection and pricing, the recognition of the physicial cuts of meat, the grades of poultry and game, the freshness and grades of fish and seafoods, the time and season to buy, how to store and preserve foods economically without unnecessary investment, how to evaluate the advertising of food products.
Tuesday — 7:00 to 10:00 p.m. 8 wks. 24 hrs. Campus K.
Fee — $35.00.

SECOND YEAR

ADVANCED PRACTICAL COOKERY — F 904

Prerequisite: Basic practical cookery.
This course will take the basic principles of cooking and apply them to the classical dishes of the countries in continental Europe. Student will be taught the French classics, the famed Italian pastas, the Spanish paellas, the Russian coulibiacs, the Scandanavian smoregasbords, the German sauer braten and beer soups, the shish kabobs of Turkey and Greece, the bouillabase of Marseilles, Indian curries, Japanese suki yaki, the nasi goreng of Indonesia and a host of other famous dishes.
Date — To be announced — 6:00 to 10:00 p.m. 10 wks. 40 hrs. Campus K.
Fee — $75.00.

CREATIVE PASTRY AND DESSERTS — F 905

This course will take the basic knowledge of pastry and desserts and allow the development of these techniques to create the patisserie masterpieces ,the flamboyant desserts, ice cream bombs, souffles, petits fours, tortes, gateaux, and sugar creations with the decorative centre pieces, the true art of french pastries and their presentation.
Date — To be announced — 6:00 to 10:00 p.m. 10 wks. 40 hrs. Campus K.
Fee — $50.00.

SECOND YEAR (continued)

PLANNED "ENTERTAINING" FOR PLEASURE — F 906

This course is designed to give the student a master plan for catering within the home or rented establishment. The larger parties that the hostess may be called upon to organize such functions as weddings, showers, cocktail parties, lunches, dinners, barbecues, birthday, anniversary parties, or any other occasion when quantity, quality and economics must be given equal attention. There are many considerations, and expert planning is the answer.
Date — To be announced — 6:00 to 10:00 p.m. 7 wks. 28 hrs. Campus K.
Fee — $30.00.

APPRECIATION OF WINES, SPIRITS AND LIQUEURS — F 907

This course will be devoted to the knowledge of wines, primarily from the standpoint of types, vintage, and prices, secondly from the handling, storage, and correct usage in relation to the menu, the countries of origin, and districts, and the grading by the authorities, the correct glassware, the serving temperatures, and the evaluation by taste of the more distinct wines by special guest lecturers.
Date — To be announced — 6:00 to 10:00 p.m. 8 wks. 32 hrs. Campus K.
Fee — $35.00.

STRICTLY FOR ENTERTAINMENT — F 908 X

Prerequisite — This course is designed for those homemakers having a basic knowledge of cooking but wish to entertain at home with flair and imagination.
Course Content — A series of lectures and demonstrations. Although the meals prepared are not intended to represent the canonical fare for the family, the basic principles of the selection, combination and cooking of food can be applied to everyday use. Each session will be devoted to a complete menu and students will be given the opportunity to taste each dish whenever possible. A selection of complimentary wines will be discussed and sampled.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus K.
Fee — $30.00.

WINE MAKING FOR THE AMATEUR — F 909 X

Prerequisite — This course is designed for those persons interested in the art and craft of making wines at home and is open to any person over the age of twenty-one.
Course Content — Brief history of wine making, basic wine making equipment, yeast and yeast cultures, stages in wine making, basic methods of testing analysis and evaluation. Students will be given the opportunity to participate in all stages of the program including making various types of wines, conducting tests and taste evaluation of both homemade and commercial wines.
Thursday — 7:00 to 10:00 p.m. 30 hrs. Campus K.
Fee — $26.00.

GRAPHIC ARTS

INTRODUCTION TO TYPOGRAPHY — GR 100
This course is designed to provide a general appreciation of the subject through a balanced programme of illustrated lectures and practical work. It will also provide the layman with a comprehensive background to enabe him to make his own critical assessment in the typographic design field. The emphasis throughout the course will be on the contemporary scene. The historical and technical aspect will be covered only in as much detail as an understanding of contemporary work is required.
Course Content — A definition of typography, Historical and technical development. The relationship with other arts, basic principles of design, working methods, typography in various media — books/brochures/advertising etc., future development, preparation of mechanicals and illustrations.
Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus T. Fee — $26.00.

MONOTYPE KEYBOARD (BASIC) — GR 200A
Prerequisite — Hand composition or linecaster operation (typewriter ability preferred).
The purpose is to introduce the student to the Monotype System, operating mechanisms, and to develop operating speeds to enable students to advance into a new course, involving more complex and tabular composition.
Course Content — The set and unit system, mechanical operations, fingering exercises, conversion tables, MCA arrangements, setting of justified, flush left, right and centred lines, leadered work, prepare caster labels. Setting various jobs using all alphabets in various formats.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus T.
Fee — $60.00.

MONOTYPE CASTER (OPERATING COURSE) — GR 200B
Prerequisite — Hand composition or linecaster operation or monotype keyboard.
The purpose is to introduce the student to the Monotype System, operating mechanisms, and to enable the student to set up and operate caster.
Course Content — The set and unit system mechanical operations, pump mechanism maintenance, mould maintenance, matrix case arrangement, sizing and line-up, line measures and running sorts and job ribbons.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus T.
Fee — $50.00.

PHOTOCOMPOSITION (OPERATING COURSE) — GR 202
Prerequisite — Hot metal composition.
The purpose is to introduce the student to the operating principles of the 713-20 Photon Textmaster and KC-10 or Linofilm Quick.
Course Content — Film strips optics and escapement, memory programming, tape codes, test panel (read, justify and expose cycles). Operating functions and development of materials. Five-week typing orientation prior to Keycomp 10 operation. Compugraphic (7200) display.
Wednesday — 7:00 to 10:00 p.m. 60 hrs. Basic, 60 hrs. Advanced. Campus T.
Fee — $46.00 each level.

BLACK AND WHITE REPRODUCTION — GR 105 (Basic) & GR 107 (Advanced)
Prerequisite — Preference will be given to candidates employed in the Graphic Arts Industry.
This course is intended as an introduction to Graphic Arts Photography.
Course Content — Light and illumination, densitometry, chemistry of photography, operation of the process cameras, line and fine line, halftone, photography for the lithographic or gravure process; an introduction to film processors.
Thursday — 7:00 to 10:00 p.m. 120 hrs. Campus T.
Fee — $46.00 each course.

COLOUR REPRODUCTION OFFSET — GR 205
Prerequisite — Extensive experience in line and halftone photography.
Course Content — This course is intended as an introduction to basic colour separation procedures, and will include the theory of colour reproductoin, separation and correction; densitometry and characteristic curves; materials and equipment required; dye masks and silver masks will be used to make continuous tone separations from transmission and reflection copy; students will gain practical experience in colour separations and screen positives.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus T. Fee — $46.00.

COLOUR REPRODUCTION ROTOGRAVURE — GR 207
Prerequisite — Extensive experience in line and halftone photography.
Course Content — This course is intended as an introduction to basic colour separation procedures, and will include the theory of colour reproduction, separation and correction; densitometry and characteristic curves; materials and equipment required; dye masks and silver masks will be used to make continuous tone separations from transmission and reflection copy; students will gain practical experience in colour separations and screen positives.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus T. Fee — $46.00.

FILM IMPOSITION AND STRIPPING — GR 210
Prerequisite — Preference will be given to candidates employed in the Graphic Arts Industry.
Course Content — Basic mathematics, drafting and layout practices, job planning, layout and imposition, stripping procedures and operations for black and white and colour, step and repeat using pin register system, photographic contacts, spreads and chokes, and an introduction to process colour stripping.
Tuesday — 7:00 to 10:00 p.m. Course consists of 2 - 60 hr. sessions. Campus T.
Fee — $46.00 per session.

MACHINE PRINTING — GR 217
Rotogravure and Flexographic (Advanced).
Prerequisite — Preference will be given to candidates with a working knowledge of the printing machinery.
This course is designed to outline the principles of roll feed printing equipment of the rotogravure and flexographic printing process.
Course Content — Fundamentals of rotogravure and flexographic printing; inks, rolls, register and tension controls, electrical controls, Doctor blades, gas dryer ovens, handling of gravure cylinders.
Tuesday — 7:00 to 10:00 p.m. Campus T. 2-60 hr. sessions.
Fee — $46.00 each session.

MACHINE PRINTING — GR 115
Offset Lithography on Multilith presses Single Colour (Basic).
This course is designed for candidates with some knowledge of printing and machinery.
Course Content — Basic fundamentals of offset lithography, feeder, water and ink controls: dampening systems (both conventional and alcohol), colour control. This is a basic programme which leads to advance pressmanship.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus T. Fee — $36.00.

MACHINE PRINTING — GR 117
Offset Lithography on Heidelberg, Harris and Miehle presses, Single Colour (Basic).
This course is designed for candidates with a working knowledge of printing and machinery.
Course Content — Basic fundamentals of offset lithography, feeder, water and ink controls, dampening systems (both conventional and alcohol), colour control, and advance training programme for those who have completed GR 115 or equivalent.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus T. Fee — $46.00.

MACHINE PRINTING — GR 215
Offset Lithography, 2-colour (Basic and Advanced).
This course is designed for candidates presently working in the industry and who have extensive knowledge of offset lithographic pressmanship or who have attended course GR 117.
Course Content — Fundamentals of offset lithography, feeder and inking systems, dampening systems (conventional and alcohol), register, print, ink, paper, cylinders, multi-colour equipment, densitometer application.
Thursday — 7:00 to 10:00 p.m. 2 - 60 hr sessions. Campus T.
Fee — $46.00 each session.

BINDING AND FINISHING — GR 125
Programmed Cutter and Folder.
Prerequisite — Proficiency in some bindery operations is desirable.
The purpose of the course is to explain the engineering principles, set-up procedures, preventative maintenance, and to provide practical experience in the actual operation of the equipment.
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus T. Fee — $46.00.

BINDING AND FINISHING — GR 126
Sewing and Stitching.
Prerequisite — Proficiency in some bindery operations is desirable.
The purpose of this course is to acquaint the candidate with the different kinds of sewing and stitching methods, engineering principles, set-up procedures, preventive maintenance and to provide practical experience in actual operation of the equipment, making dummies and related exercises.
Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus T. Fee — $26.00.

BINDING AND FINISHING — GR 225
Perfect-Adhestive Binding and Gathering.
Prerequisite — Proficiency in some bindery operations is desirable.
The purpose of this course is to familiarize the candidate with procedures in high speed binding, theoretical and practical aspects of perfect binding and its importance in the knowledge explosion age.
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus T. Fee — $46.00.

QUALITY CONTROL — GR 220 & GR 222

Preference will be given to candidates employed in the Quality Control Department of Paper, Ink or Printing Industries.
Controls and standards during camera photo composition, platemaking, printing and binding processes. Statistical methods and their application in the printing industry.
Course Content — Paper, board and other printing substrates; ink and adhesive testing procedure employing related instruments.
Tuesday — 7:00 to 10:00 p.m. 2 - 60 hr. sessions. Campus T.
Fee — $36.00 each session.

VARITYPING (ADVANCED) — GR 910

Prerequisite — Previous experience and training on Varityping machine and 40 words per minute typing.
This course is designed to familiarize the Varityping operator with the advanced techniques of the operation of the Varityping Machine.
Course Content — Automatic justification and its variations, compositions of tabular copy with and without leader lines, copyfitting, forms design, ruling by hand, type selection, layout and paste-up.
Tuesday and Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus C.
Fee — $26.00.

SCREEN PROCESS PRINTING — SP 900

This course is designed for persons currently employed in this field who wish to upgrade their skills in the more specialized methods of the photographic process.
Course Content — The operation of the process camera, line and halftone film-making; the photo-screening method of silk screen reproduction; preparation of direct screen emulsion stencils, the application and procedure for good screen making.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus T. Fee — $26.00.

SCREEN PROCESS PRINTING (BASIC) — SP 901

This course is designed for persons not in the industry, but who wish to attain skills in basic stencil cutting, screen making and printing.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus T. Fee — $26.00.

COMMERCIAL ART — CA 900

Prerequisite — Interest in Art.
Course Content — Commercial Art, Life Drawing, Batik, Watercolour, Painting and Print-making.
Classes will be formed in accordance with interests and number of registrants.
Students must pay for their own materials.
Monday & Wednesday — 7:00 to 9:00 p.m. 15 wks. 60 hrs. Campus C.
Tuesday & Thursday — 7:00 to 9:00 p.m. 15 wks. 60 hrs. Campus C.
Fee — $40.00.

MARINE TECHNOLOGY

STATIONARY ENGINEERING 3rd and 4th CLASS — MAR 900

These courses are orientated towards the students successful participation in the Department of Labour's examinations as outlined under the Operating Engineers Act.
Prerequisite — 19 years of age.
Course Content — Steam boilers including safety valves, water gauges and columns blow-down and scum valves, boiler construction, feed water admission treatment and conditioning, safe operation, maintenance and inspection.
Combustion: fuels, fuel burning and firing equipment and air supply.
Auxiliary equipment: feed water heaters, condensers, pumps, injectors and air compressors.
Refrigeration systems including safe operation and maintenance. Principles of electricity, operation and maintenance of motors, generators and transformers.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.
Fee — $26.00

STATIONARY ENGINEER 2nd Class — MAR 901

Prerequisite — 3rd Class.
Course Content — Steam boilers and accessories construction and maintenance with emphasis on operation, repair and inspection and testing; combustion, fuels, heat transfer.
Refrigeration theory, operation, maintenance, repair and inspection. Air compressors, types, principles and safe operation of systems.
Mathematical calculations relating to: boiler performance, fuel combustion, draft, refrigeration performance, boiler construction, electricity and pumps.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.
Fee — $26.00.

CELESTIAL NAVIGATION FOR YACHTSMEN — MAR 904

Course Content — The Earth-Grid system of co-ordinates, the celestial sphere, celestial position lines, time, the sextant, practical instruction on sight taking, the Nautical Almanac, position fixing by the sun, moon, planets and stars (H.O. 214 method), compass error, star identification.
Tuesday and Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.
Fee — $26.00.

SMALL BOAT BUILDING, REPAIR AND MAINTENANCE — MAR 906 X

Course Content — Introduction to small boat building, materials and tools, safe working methods, type of small boats, layout of component parts, type of construction, practical construction, finishing, surface filling, protective material.
PROPULSION — Types of sails, masts and rigging, fittings, small motors.
Tuesday or Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.
Fee — $26.00, plus cost of materials.

BOAT BUILDING AND YACHT DESIGN COURSE — MAR 907 X

This is a two-year course in Marine Technology comprising theory, design and practical small boat construction. It is a more advanced course to be undertaken by students who have completed the existing course in Small Boat Building, Repairs and Maintenance or by students who desire a more advanced course of study.
Course Content — an introduction to naval architecture, mathematics, calculation, stability calculation, hydrostatic curves, launching procedures, contracts and forms.
SHOP — plans and their uses, scales, lofting, parts and sections, power, controls, rudders, rigging, auxiliary equipment, launching tests, and trials.
Parts and sections will be developed and constructed by students. If possible a small, approximately 30' vessel will be constructed. Wood and Fibre Glass construction will be dealt with and Fibre Glass repairs.
Steel construction will be dealt with by lecture only at present.
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.
Fee — $26.00. plus appropriate material cost.

ENGINES FOR YACHTSMEN — MAR 908

Prerequisite — Interest in all marine engines.
Course Content — Theory of the 2 and 4 stroke cycle engines. Construction of engine components, their functions and requirements; oil systems, cooling systems, starting motors, pumps and fuel systems.
Timing and adjustment of pump injectors. Thrust bearings and marine gear boxes, engine governors.
Care and maintenance, trouble shooting and winter lay up.
Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus CL.
Fee — $26.00.

CANADIAN POWER SQUADRON COURSES

In addition to the foregoing the College provides accommodation for courses offered by the Toronto Power Squadron. Registration for these courses will take place on Monday, September 14th, from 7.30 p.m. to 9.30 p.m. at 37 Dartnell Avenue. Classes begin during the week of September 28th, with the exception of courses marked *, which begin one week later. All courses will end on the date set by the examination board, which will be announced. Further information may be obtained by telephoning the Toronto Power Squadron at: RU. 1-0005.

The courses offered are listed below. All classes Campus CL.

PILOTING — **$30.00**. Available both Monday and Wednesday. Terminology — Equipment — Government regulations — Rules of the road at sea — Safety at sea — Mariner's compass — Aids of navigation — Charts and piloting — Manners and customs on board. Successful completion of this course qualifies a person for membership in Canadian Power Squadrons and admission to other courses. Membership is open to men, women and juniors (Under 18).

THE FOLLOWING ADVANCED COURSES ARE OPEN TO MEMBERS OF CANADIAN POWER SQUADRON

* SEAMANSHIP — $10.00. Handling small craft, both power and sail, marlinspike, elementary weather, adverse conditions, gear and equipment, problems.
  Tuesday.
* ADVANCED PILOTING — **$10.00**. Advanced chartwork and methods of determining position. Leeway allowances, tides and currents. Elementary radio aids to navigation.
  Wednesday
* ENGINE MAINTENANCE — $10.00. Operating principles of marine engines, inboard and outboard. Electrical, fuel, lubrication and cooling systems. This course is designed to make boatmen more self-reliant, not to train engine mechanics.
  Monday
* MARINE ELECTRONICS — $10.00. Marine radio maintenance and communication procedures. Radio direction finding, radar, Loran and Consolan. Electronic marine aids and equipment. The course includes the requirements of the D.O.T. examination for the Restricted Radio-telephone Operator's license.
  Monday
* SAILING — $13.50. Terminology, rigging, points of sail, true and apparent wind, theory of sail action, bending, setting and care of sails. Some aspects of racing are also covered.
  Tuesday
* WEATHER — $10.00. The atmosphere, air masses, wind systems, causes of weather, observing and interpreting weather signs, elementary forecasting. The emphasis of this course is on short-range forecasting for small boats at sea.
  Tuesday
* JUNIOR NAVIGATOR — $25.00. Open only to successful candidates in both Seamanship and Advanced Piloting. Introduction to deep-sea navigation using celestial techniques. Care and use of the sextant. Reduction of star sights to determine position. Elementary time, and sailings and pilot charts.
  Tuesday
* NAVIGATOR — $25.00. Open only to successful candidates in Junior Navigator. Coordinate systems, navigational astronomy, civil, solar and sidereal time, star identification, refined methods of sight reduction.
  Monday

Note: All course fees are subject to confirmation.

SPECIAL TECHNIQUES

MEN'S HAIRSTYLING — BARB 900

Prerequisite — Ontario Certificate of Qualification and currently employed.
Course Content — practical haircutting, shampoos, discussion on styles, styling and blow waving, tinting, bleaching, processing, razor cutting, hair pieces.
Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

BARBERS' PRECERTIFICATION — BARB 901

Prerequisite — Students must be registered apprentices who have completed their training but require a review of theory for the Certificate of Qualification exam.
Course Content — A complete review of the theory of the trade as taught to Apprentice classes in the full time day course.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

LADIES' HAIRSTYLING (ADVANCED) — HAIR 900

Prerequisite — Ontario Certificate of Qualification and currently employed.
Course Content — review of basic techniques, advanced methods of scissor cutting, blow-waving, ironing, back-combing and back-brushing techniques, handling long hair, hair pieces and current fashion trends.
Mondays and Wednesdays — 7:00 to 10:00 p.m. 60 hrs. Campus K.
Laboratory Fee — $24.00. Total — $50.00.

HAIRDRESSERS' PRECERTIFICATION — HAIR 901

Prerequisite — Students must be registered apprentices who have completed their training but require a review of theory for the Certificate of Qualification exam.
Course Content — A complete review of the theory of the trade as taught to Apprentice classes in the full time day course.
Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus K.

DRESSMAKING I — ST 900

Prerequisite — Novice or inexperienced sewer aiming to acquire skills in Custom Dressmaking.
Course Content — Projects are: shifts or jumpers (cotton or bonded fabric) and skirts (wool) and/or blouses (cotton). Measurements, relationship of pattern, style and fabric, laying out of pattern, basting, perfect darts, fitting, zippers, collars, sleeves, etc. The student will provide her own material.
Monday — 7:00 to 10:00 p.m. 60 hrs. Campus C.

DRESSMAKING II — ST 901

Prerequisite — ST 900 or equivalent.
Course Content — Projects are: detailed dresses, skirts and weskits (lined) and gowns. Basic review and evaluation of methods, emphasis on fitting, hand finishes and detail, application of trims, bound button holes, pockets, hand sewn zippers, etc. The student will provide her own material.
Wednesday — 7:00 to 10:00 p.m. 60 hrs. Campus C.

GARMENT PATTERN DRAFTING AND DESIGN (Beginners) — ST 902

Prerequisite — This course is for the student who is knowledgeable in dressmaking.
Course Content — The course includes a systematic method of pattern cutting by drafting directly on paper or on the flat as it is often called.

1. Drafting the basic foundation pattern for your figure type and manufacturing size.
2. Emphasis on fitting and alteration of patterns.
3. Understanding the basic principles of the craft, what makes the collar roll a certain way or fit a certain way, what makes a flare, why gathers fall in one direction or another, how darts are used to fit and style effects, why a sleeve is comfortable. You will be able to obtain these effects by designing from a sketch or your original ideas.

Tuesday — 7:00 to 10:00 p.m. 60 hrs. Campus C. — Fee $26.00

GARMENT PATTERN DRAFTING AND DESIGN (Advanced) — ST 903

Prerequisite — Successful completion of ST 902, which includes drafting the basic foundation blocks to personal size and manufacturing size.
Course Content — The course will consist of designing a garment from a sketch or an original idea. It will include creative styling such as coats, suits, sportswear, etc., and also dresswear.
Thursday — 7:00 to 10:00 p.m. 60 hrs. Campus C. — Fee $26.00

FUR COURSE I — ST 905

Prerequisite — For salespeople, advertising staff, consumers, etc.
Course Content — The aim is to learn to identify furs in all forms as they appear on the world markets; to learn Fur Facts versus fantasies and fables; to learn the proper care, approximate expected life, causes of wear in garments. Recognition of 200 furs, nature of fur and hair, wearability, methods of manufacture. Also included will be some styling and history of fur fashions, fur conservation and ecology, storage and fur insurance rates and problems including the cleaning of furs.
Furs will be displayed in skins and garments and recognition tests will be given.
Several information sheets and excerpts of Government labelling laws, etc., will be provided.
Wednesday — 7:00 to 10:00 p.m. 30 hrs. Campus C.

ADVANCED TECHNICAL EVENING COURSE

GENERAL INFORMATION

Advanced technical evening courses will be offered in the subjects listed under the table of contents.
Theory courses will be 60 hours in length consisting of twenty (20) three (3) hours lectures.
Technical science courses will be 60 hours in length consisting of forty (40) hour lectures and twenty (20) hour laboratory sessions.
Counselling and personal interviews will be held during the evenings of registration.
The Colleges of Applied Arts and Technology within the Greater Metropolitan Toronto group will be offering the following series of block programs to assist their students to better schedule their extension courses in the advanced technician field. The blocks follow:

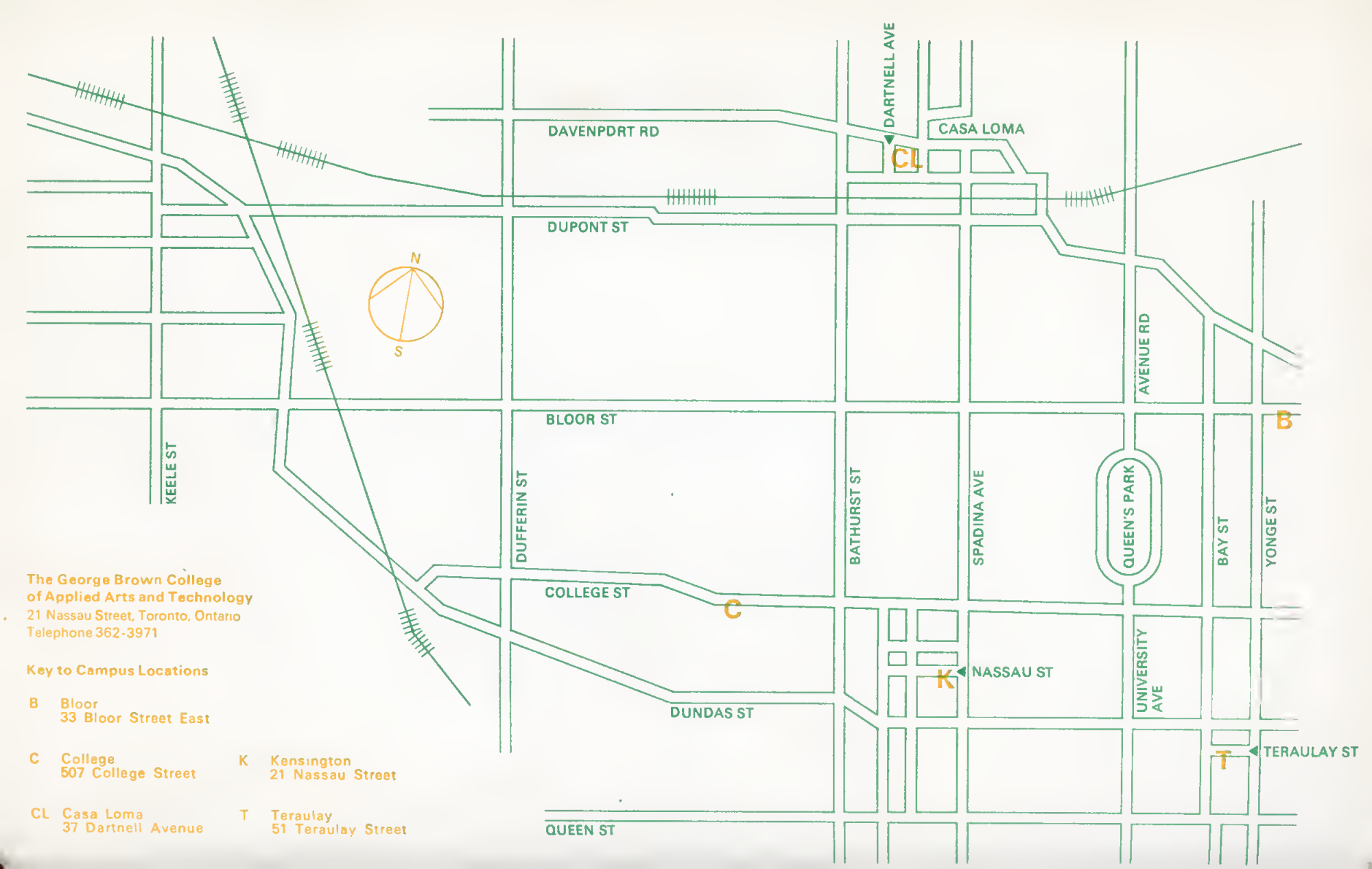
Civil
Mathematics I — MATH 100
Mathematics II — MATH 200
Technical Drawing (Civil) — DR 100
Physics I — PHYS 100
Surveying — SURV 101
Mechanics I — MECH 100
Mechanics of Materials I — MECH 110

Electrical
Mathematics I — MATH 100
Mathematics II — MATH 200
Electrical Fundamentals — EL 905
Electronic Fundamentals — ELTC 904
Physics I — PHYS 100
Power Systems — EL 908
Electrical Drafting (Basic) — EL 903

Electronics
Mathematics I — MATH 100
Mathematics II — MATH 200
Electrical Fundamentals — EL 905
Electronic Fundamentals — ELTC 904
A.C. Circuits — EL 906
Electronic Circuits — ELTC 905
Physics I — PHYS 100

Mechanical
Mathematics I — MATH 100
Mathematics II — MATH 200
Mechanics I — MECH 100
Mechanics of Materials I — MECH 110
Electrical Fundamentals — EL 905
Physics I — PHYS 100
Technical Drawing I — DR 100

The above courses are for persons who hold a secondary school Graduation Diploma or the equivalent and who wish to begin or continue their education in the various technologies. A minimum of 50% for each subject, with an overall average of 60% is required for the certificate issued by O.A.C.E.T.T.
Optional subjects may be selected but confirmation of the school of your choice is necessary. By adding English I and one more technical subject the student can qualify for the A.T.E.C. grade I certificate.
Complete information on the Advanced Technical Evening Class programs is available from the Ontario Department of Education, Applied Arts and Technology Branch, 55 Eglinton Avenue East, Toronto 12.



The George Brown College of Applied Arts and Technology
21 Nassau Street, Toronto, Ontario
Telephone 362-3971

Key to Campus Locations

B Bloor
33 Bloor Street East

C College
507 College Street

K Kensington
21 Nassau Street

CL Casa Loma
37 Dartnell Avenue

T Teraulay
51 Teraulay Street